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Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3032	12800	22703	1.16	1.0E-12	AF006991.1	NT	Homo sapiens brain-specific Testis Transcript Y 2 (TTY2) mRNA, partial cds
3798	13710	23406	27.7	1.0E-12	AU12248.1	EST_HUMAN	AU132248 NT2RP3 Homo sapiens cDNA clone NT2RP300470 5'
3798	13710	23407	27.7	1.0E-12	AU12248.1	EST_HUMAN	AU132248 NT2RP3 Homo sapiens cDNA clone NT2RP300470 5'
5930	15544		1.73	1.0E-12	U02268.1	NT	Homo sapiens ataxia telangiectasia (ATM) gene, complete cds
5932	15591		1.82	1.0E-12	G97267	SWISSPROT	HYPOPHYSICAL ZINC FINGER PROTEIN KIAA0831
6224	16000	26240	1.72	1.0E-12	AF168094.1	NT	Homo sapiens putative BPES syndrome head-on region protein gene, complete cds
6240	19106	26256	9.11	1.0E-12	AI248633.1	EST_HUMAN	gb-M16503 LINE-1 REVERSE TRANSCRIPTASE HOMOLOG (HUMAN); contains MER10.11 MER10 repetitive element
6240	19106	26257	9.11	1.0E-12	AI248633.1	EST_HUMAN	gb-M16503 LINE-1 REVERSE TRANSCRIPTASE HOMOLOG (HUMAN); contains MER10.11 MER10 repetitive element
7051	18228	27119	1.37	1.0E-12	AW62328.1	EST_HUMAN	ac25055.1 Strabipone cDNA (557217) Homo sapiens cDNA clone IMAGE85757 3'
9095	18560	28118	3.36	1.0E-12	AW62164.1	EST_HUMAN	ES137437 IMAGE85757 Homo sapiens cDNA clone IMAGE85757 3'
9303	19728		2.2	1.0E-12	P44836	SWISSPROT	PROBABLY TONE-DEPENDENT RECEPTOR HD772 PRECURSOR
9363	19423		2.72	1.0E-12	X68496.1	NT	Nucleosome mitochondrial 12S rRNA gene
3873	13489	23570	1.13	9.0E-13	AJ27735.1	NT	Homo sapiens Xa pseudotubercular region, segment 1/2
3855	13778		1.16	8.0E-13	AB025000.1	NT	Homo sapiens CS1 gene for centronucleus autotransferase, exon 1, 2, 3, 4, 5
7837	17688		2.37	9.0E-13	AB06953.1	EST_HUMAN	2203006.1 Swains Island liver system NF1S Homo sapiens cDNA clone IMAGE26051 3'
700	10533	20459	5.05	8.0E-13	U29185.1	NT	Homo sapiens p10n protein (p10) gene, complete cds
700	10533	20459	5.05	8.0E-13	U29185.1	NT	Homo sapiens p10n protein (p10) gene, complete cds
1756	11894	21570	1.36	8.0E-13	U60017.1	NT	Homo sapiens basic transcription factor 2 p44 (bTF2p44) gene, partial cds, neuronal apoptosis inhibitory protein (nrip) and survival motor neuron protein (smn) genes, complete cds
7638	17688		2.13	8.0E-13	U78027.1	NT	Homo sapiens Butorin's tyrosine kinase (BTK), alpha-D-galactosidase A (GLA), L44-like ribosomal protein (L44), and PTP3 (PTP3) genes, complete cds
8894	18786	25076	2.49	8.0E-13	U69980.1	NT	Human gamma T-cell receptor beta chain TORBV1351, TORBV63421, TORBV63422, TORBV63423, TORBV63424, TORBV63425, TORBV63426, TORBV63427, TORBV63428, TORBV63429, TORBV63430, TORBV63431, TORBV63432, TORBV63433, TORBV63434, TORBV63435, TORBV63436, TORBV63437, TORBV63438, TORBV63439, TORBV63440, TORBV63441, TORBV63442, TORBV63443, TORBV63444, TORBV63445, TORBV63446, TORBV63447, TORBV63448, TORBV63449, TORBV63450, TORBV63451, TORBV63452, TORBV63453, TORBV63454, TORBV63455, TORBV63456, TORBV63457, TORBV63458, TORBV63459, TORBV63460, TORBV63461, TORBV63462, TORBV63463, TORBV63464, TORBV63465, TORBV63466, TORBV63467, TORBV63468, TORBV63469, TORBV63470, TORBV63471, TORBV63472, TORBV63473, TORBV63474, TORBV63475, TORBV63476, TORBV63477, TORBV63478, TORBV63479, TORBV63480, TORBV63481, TORBV63482, TORBV63483, TORBV63484, TORBV63485, TORBV63486, TORBV63487, TORBV63488, TORBV63489, TORBV63490, TORBV63491, TORBV63492, TORBV63493, TORBV63494, TORBV63495, 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Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar BLAST E Value	Top Hit Accession No.	Top Hit Distance Score	Top Hit Descriptor
3280	13201		1.09	5.0E-13	R76336.1	EST_HUMAN	96204.T1 Sources placenta NUCB2 Homo sapiens cDNA clone IMAGE:145759.5'
3351	13271		1.45	5.0E-13	AA436773.1	EST_HUMAN	277812.a1 Sources, testis, NIH Homo sapiens cDNA clone IMAGE:728350.3' similar to contains AU repetitive element containing element MER22 repetitive element;
8234	10115	29307	2.76	5.0E-13	P07173.3	SWISSPROT	MYOSON LIGHT CHAIN KINASE, SKELETAL MUSCLE (MLCK);
1824	11721		2.96	4.0E-13	AM37804.1	EST_HUMAN	PVH-IT0221-2221099-001-01 HT0224 Homo sapiens cDNA
2411	12298		1.63	4.0E-13	AF035350.1	NT	Homo sapiens glycocalyx 3 (GPC3) gene, partial cds and flanking repeat regions
5190	13330	25404	4.86	4.0E-13	BE163131.1	EST_HUMAN	PKM-IT0050-290200-002-008 HT0520 Homo sapiens cDNA
6278	18142	26288	1.92	4.0E-13	AB037790.1	NT	Homo sapiens mRNA for KIAA1329 protein, partial cds
6542	16400		1.62	4.0E-13	N44291.1	EST_HUMAN	Y65908.1 Sources melanocytes 2N6HM Homo sapiens cDNA clone IMAGE:779360.5' similar to PIR.A32995
7757	17607	27631	4.57	4.0E-13	AI298831.1	EST_HUMAN	A32995.1 complex similarity protein - mouse ;
8507	18379	28623	1.83	4.0E-13	AA43816.1	EST_HUMAN	q13205.E1 NC1 CGAP_K45 Homo sapiens cDNA clone IMAGE:188945.3' similar to contains AU repetitive element
8507	18379	28646	1.83	4.0E-13	AA43816.1	EST_HUMAN	z77810.a1 Sources, testis, NIH Homo sapiens cDNA clone IMAGE:72851.4.3'
173	10144		3.8	3.0E-13	AF003528.1	NT	z77810.a1 Sources, testis, NIH Homo sapiens cDNA clone IMAGE:72851.4.3'
847	10774		1.37	3.0E-13	AA430310.1	EST_HUMAN	Homo sapiens X-linked arylsulphatase ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
2310	12200	22069	1.26	3.0E-13	AI271795.1	NT	z65908.1 Sources, testis, NIH Homo sapiens cDNA clone IMAGE:761466.5'
2428	12305		2.63	3.0E-13	AL163210.2	NT	Homo sapiens Xq pseudautosomal region, segment 2/2
2620	12407	22597	4.23	3.0E-13	BF127862.1	EST_HUMAN	Homo sapiens chromosome 21 segment H32 C310
3150	13075		2.86	3.0E-13	AA746944.1	EST_HUMAN	OMG-FT0100-140700-242408 FT0100 Homo sapiens cDNA
							ab18402.a1 NC1 CGAP_K46 Homo sapiens cDNA clone IMAGE:132033.3'
6801	19491	20669	5.92	3.0E-13	U62111.2	NT	Homo sapiens X28 region near ALD locus containing dual specificity phosphatase 9 (DUSP9), ribosomal protein L18a (RPL18a), Cdk-2/Camodulin-dependent protein kinase (CDMK), creatine transporter (CRTTR), CDM protein (CDM), heterodisulphide isomerase protein >
8054	17955		4.03	3.0E-13	AI004708.1	EST_HUMAN	CA05588 Homo sapiens fetal liver cDNA library Homo sapiens cDNA
8054	18279	28351	3.65	3.0E-13	BE068209.1	EST_HUMAN	CA05170281-031199-037 a03 B10281 Homo sapiens cDNA
8870	18688	28980	2.6	3.0E-13	AL163248.2	NT	Homo sapiens chromosome 21 segment H3210048
							Homo sapiens X28 region near ALD locus containing dual specificity phosphatase 9 (DUSP9), ribosomal protein L18a (RPL18a), Cdk-2/Camodulin-dependent protein kinase (CDMK), creatine transporter (CRTTR), CDM protein (CDM), heterodisulphide isomerase protein >
1441	10116	18638	2.77	2.0E-13	U62111.2	NT	Danio rerio fibroblast growth factor receptor 3 mRNA, complete cds
239	10207	20024	1.31	2.0E-13	U23539.1	NT	
1249	11160	21005	4.71	2.0E-13	AF239710.1	NT	Homo sapiens DNA polymerase delta small subunit (POLD2) gene, exons 1 through 11 and complete cds
3244	13167	22093	1.08	2.0E-13	BF146868.1	EST_HUMAN	res01605.X1 Sources NSF_P3 BW OT PA_P_ST Homo sapiens cDNA clone IMAGE:3'

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Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Meat Stimuli (Top) Ht BLAST Value	Top Ht Database Source	Top Ht Descriptor
4019	13023		1.72	2.0E-13 AL163278.2	NT	Homo sapiens chromosome 21 segment B21C076
5722	19629	20732	3.87	2.0E-13 Q08862	SWISSPROT	GELL SURFACE GLYCOPROTEIN-1 PRECURSOR (OUTER LAYER PROTEIN B) (SLAYER PROTEIN 1)
6576	16061	25020	6.32	2.0E-13 L16912.1	NT	Human PFKL gene for liver-type 6-phosphoroketolase (EC 2.7.1.11) exon 2
7976	17920	28097	3.97	2.0E-13	NT	Homo sapiens mab-21 (C. elegans) like 1 (MAB21L1) mRNA
9251	18051		7.42	2.0E-13 AW902156.1	EST_HUMAN	CGM-N0001-100390-274a-11 NN0001 Homo sapiens cDNA
285	10252	20072	1.37	1.0E-13 S74192.1	NT	FGF-1 fibroblast growth factor 1 [human, kidney, genomic, 342 nt, segment 2 of 2]
670	10766	22846	4.39	1.0E-13 AJ00773.1	NT	Homo sapiens LGM226 gene
1314	11220	21077	1.27	1.0E-13 X37344.1	NT	H. sapiens DMA, DMB, HUA-21, PP2, LMP2, TAP1, LMP7, TAP2, DOB, DOB2 and RING3, 8, 13 and 14 genes
1976	11899	21781	2.46	1.0E-13 AA120574.1	EST_HUMAN	me21p2.1 NCL CGAP CG30 Homo sapiens cDNA clone IMAGE:1241133 3' similar to contains THR19
4468	14382	21169	1.48	1.0E-13 BF340897.1	EST_HUMAN	THR19 repetitive element 1
8694	18672	28855	13.83	1.0E-13 BF103755.1	EST_HUMAN	602038008F1 NCL CGAP_Bme2 Homo sapiens cDNA clone IMAGE:185356 5'
5076	19393		1.62	1.0E-13 AJ716377.1	EST_HUMAN	765010.1 Scores_NSE_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:3524443 3' similar to contains MER29.12 MER39 repetitive element 1
8714	19255		1.8	1.0E-13 AJ27735.1	NT	AV176377 D38 Homo sapiens cDNA clone DCBA1503 5'
330	10289	20105	2.82	9.0E-14 AA781150.1	EST_HUMAN	Homo sapiens Xq pseudobulbar region, segment 1/2
331	10290	20106	2.85	9.0E-14 AA781150.1	EST_HUMAN	424001.s1 Scores_testis_NHT Homo sapiens cDNA clone 1391232 3' similar to contains MER19.11 MER19
2451	12228		4.04	9.0E-14 AW68167.1	EST_HUMAN	424001.s1 Scores_testis_NHT Homo sapiens cDNA clone 1391232 3' similar to contains MER19.11 MER19
2726	12587	22482	4.62	9.0E-14 AB038162.1	NT	RC4-C17022-06010-015-409 C10322 Homo sapiens cDNA
3073	13000	22793	3.74	9.0E-14 AY51298.1	EST_HUMAN	Homo sapiens TFF gene cluster for trypsin factor, complete cds
3200	10289	20105	0.08	9.0E-14 AA781150.1	EST_HUMAN	x54506.s1 NCL CGAP_UH1 Homo sapiens cDNA clone IMAGE:2707833 3'
3729	13540	23426	5.22	9.0E-14 D16547.1	NT	424001.s1 Scores_testis_NHT Homo sapiens cDNA clone 1391232 3' similar to contains MER19.11 MER19
4950	14339	24326	1.93	9.0E-14 AJ002153.1	NT	Human DNA, SINE repetitive element
3453	13989		1.57	9.0E-14 BE466263.1	EST_HUMAN	Sagittaria ocellata gene for seminal vesicle secreted protein, semenogelin 1
3872	13763		2.77	9.0E-14 R79268.1	EST_HUMAN	h271c06.x1 NCL CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3215424 3'
7434	16447	26537	0.69	9.0E-14 X5921.1	NT	yf7203.x1 Scores placenta N524P Homo sapiens cDNA clone IMAGE:144795 3'
7516	17303	27510	3.49	9.0E-14 AA116916.1	EST_HUMAN	H. sapiens DNA for endogenous retroviral like element
8732	18596		4.39	9.0E-14 BE062596.1	EST_HUMAN	zef17c10.s1 Strategene fetal retina 597202 Homo sapiens cDNA clone IMAGE:659970 3'
						QV2-8710298-26109-014-a01 B10258 Homo sapiens cDNA

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Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1611	12669		3.07	7.0E-14	AW151073.1	EST_HUMAN	x87610.Lt1 NC1_CGAP_Gusd1 Homo sapiens cDNA clone IMAGE:2823146 3' similar to contains MER10.12 MER10 repetitive element;
363	10319	20140	10.2	6.0E-14	AF020503.1	NT	Homo sapiens FRASB common fragile region, diadenosine triphosphate hydrolase (FHT) gene, exon 5
5114	14662	24765	1.02	8.0E-14	85223548	NT	Homo sapiens hypothetical protein FLJ20585 (FLJ20585), mRNA
5114	14662	24767	1.02	6.0E-14	85223548	NT	Homo sapiens hypothetical protein FLJ20585 (FLJ20585), mRNA
7552	17502	27725	2.55	6.0E-14	AF020503.1	NT	Homo sapiens FRASB common fragile region, diadenosine triphosphate hydrolase (FHT) gene, exon 5
7552	17502	27729	2.55	6.0E-14	AF020503.1	NT	Homo sapiens FRASB common fragile region, diadenosine triphosphate hydrolase (FHT) gene, exon 5
602	10439	20349	3.92	5.0E-14	Q65120	SWISSPROT	CANALICULAR MULTISPECIFIC ORGANIC ANION TRANSPORTER 1 (MULTIDRUG RESISTANCE- ASSOCIATED PROTEIN 2) (CANALICULAR MULTIDRUG RESISTANCE PROTEIN)
4895	14660	24628	1.09	5.0E-14	AW075791.1	EST_HUMAN	X03805.Xt1 NC1_CGAP_GU1 Homo sapiens cDNA clone IMAGE:2879166 3' similar to contains L1.12 L1 repetitive element;
5397	15618	25533	6.12	5.0E-14	P08547	SWISSPROT	LINE-1 REVERSE TRANSCRIPTASE HOXA10
1107	12693		1.77	4.0E-14	P06278	SWISSPROT	S-ANTIGEN PROTEIN PRECURSOR
1338	17932	21603	6.5	4.0E-14	LJ00787.1	NT	Homo sapiens LGMD3 gene
3983	13507		0.94	4.0E-14	AA446502.1	EST_HUMAN	x87605.Lt1 Scavenging protein, alpha, NDRP1 Homo sapiens cDNA clone IMAGE:287858 5' similar to contains L1.8 L1.1 repetitive element;
4194	14094	23073	1	4.0E-14	N4928.1	EST_HUMAN	W03630.Xt1 NC1_CGAP_UN1 Homo sapiens cDNA clone IMAGE:2455302 3' similar to contains ALU repetitive element
8777	46760		2.31	4.0E-14	J889324.1	EST_HUMAN	X04947.Lt1 NC1_CGAP_HNT1 Homo sapiens cDNA clone IMAGE:2743343 3' similar to contains ALU repetitive element; contains element MER3 repetitive element;
934	10559	20735	2.13	3.0E-14	J35453.1	NT	Homo sapiens a disintegrin and metalloproteinase domain 28 (ADAM28), mRNA
4941	14722	24653	0.82	3.0E-14	AW26354.1	EST_HUMAN	h04411.Lt1 NC1_CGAP_Kd11 Homo sapiens cDNA clone IMAGE:3195501 3' similar to contains MER4.12 MER4 repetitive element;
4844	14725	24657	1.1	3.0E-14	7659864	NT	CIRCUMPORZONATE PROTEIN PRECURSOR (CS)
5104	14672		1.23	3.0E-14	BE466372.1	EST_HUMAN	X04947.Lt1 NC1_CGAP_HNT1 Homo sapiens cDNA clone IMAGE:2743343 3' similar to contains ALU repetitive element; contains element MER3 repetitive element;
5157	15024	24791	1.5	3.0E-14	P02954	SWISSPROT	Homo sapiens Xq pseudautosomal region, segment 22
6565	14722	24655	7.99	3.0E-14	AW26354.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS27C103
384	10331	20154	3.98	2.0E-14	AJ271735.1	NT	
384	10331	20155	3.98	2.0E-14	AJ271735.1	NT	
675	12673	20428	6.35	2.0E-14	AL103903.2	NT	



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Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF-SEQ ID NO:	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2359	12219		1.36	2.0E-14	AF137868.1	EST_HUMAN	RC5-B10397-077-296-031-D12 BT0877 Homo sapiens cDNA
2416	12293		1.09	2.0E-14	7857629	NT	Homo sapiens ribosomal tumor deletion region protein 1 (RTDR1), mRNA
2476	12365	22246	1.24	2.0E-14	AL163209.2	NT	Homo sapiens chromosome 21 segment HS21C008
2440	12397		0.95	2.0E-14	P08548	SWISSPROT	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
6505	16233	26485	2.96	2.0E-14	010317.1	NT	Human beta globin region on chromosome 11
6114	16008		2.18	2.0E-14	BE003550.1	EST_HUMAN	RC3-BN0072-240202-071-402 BN0072 Homo sapiens cDNA
6322	16293	26454	19.91	2.0E-14	BE189761.1	EST_HUMAN	L24-H10397-071296-024-004 HT0397 Homo sapiens cDNA
6422	16293	26455	19.91	2.0E-14	BE189761.1	EST_HUMAN	L24-H10397-071296-024-004 HT0397 Homo sapiens cDNA
8163	16248	26303	4.78	2.0E-14	AW138600.1	EST_HUMAN	UHH-B17-adv-wc (C-UL)1 NCL CGAP Sub3 Homo sapiens cDNA clone IMAGE:2718244.5
8791	15223	25485	1.31	2.0E-14	010317.1	NT	Human beta globin region on chromosome 11
1051	10568	20310	1.31	1.0E-14	AL163248.2	NT	Homo sapiens chromosome 21 segment HS21C046
1384	11289	21143	7.67	1.0E-14	AL163388.2	NT	Homo sapiens chromosome 21 segment HS21C058
1384	11289	21144	7.67	1.0E-14	AL163286.2	NT	Homo sapiens chromosome 21 segment HS21C068
1686	11951	21738	21.64	1.0E-14	LA4140.1	NT	Homo sapiens chromosome X region from flamm (FLN) gene to glucose-6-phosphate dehydrogenase (G6PD) gene, complete cds
2137	12028	21921	6.77	1.0E-14	AL163303.2	NT	Homo sapiens chromosome 21 segment HS21C103
2358	12238	22134	6.43	1.0E-14	AF01099.1	NT	Homo sapiens ribosomal protein L24 (RPL24) gene, complete cds
2514	12841	22841	1.38	1.0E-14	P06227	SWISSPROT	HISTONE-RICH PROTEIN PRECURSOR (CLONE PHR2-II)
3130	13065	22954	4.67	1.0E-14	BF35227.1	EST_HUMAN	RC2-CT0432-31070-073-409_1 CT0432 Homo sapiens cDNA
3130	13065	22955	4.67	1.0E-14	BF35227.1	EST_HUMAN	RC2-CT0432-31070-073-409_1 CT0432 Homo sapiens cDNA
3871	13723	23512	2	1.0E-14	AM682904.1	EST_HUMAN	aa0627.21 Stratiopene scabra brain ST1 Homo sapiens cDNA clone IMAGE:971562.3
4314	14270	24051	1.74	1.0E-14	AW279852.1	EST_HUMAN	xx93910.x1 NCL CGAP Sub3 Homo sapiens cDNA clone IMAGE:2750059.3
4574	15466	25938	1.97	1.0E-14	AF128148.1	NT	Bos laurus xanthodiolide-methyl fatty acid CoA ligase form XL-III mRNA, nuclear mRNA encoding mitochondrial protein, complete cds
6012	16467	26045	10.41	1.0E-14	11437150	NT	Homo sapiens proteinin (mouse)-like 1 (PRONL1), mRNA
6012	16467	26045	10.41	1.0E-14	11437150	NT	Homo sapiens proteinin (mouse)-like 1 (PRONL1), mRNA
1558	11463	21320	2.85	9.0E-15	7427622	NT	Homo sapiens protein (mouse)-like 1 (PRONL1), mRNA
						NT	Homo sapiens protein (mouse)-like 1 (PRONL1), mRNA
						NT	Homo sapiens protein (mouse)-like 1 (PRONL1), mRNA
						NT	Homo sapiens transcription factor (KHM) enhancer 3, JM11 protein, JM1 protein, T54 protein, JM10 protein, A4 differentiation-dependent protein, triple LM domain protein 6, and synapophycin genes, complete cds, and L-type calcium channel alpha
2126	12014		1.64	9.0E-15	AF166779.1	NT	GAG POLYPROTEIN CONTAINS: CORE PROTEINS P15, P12, P30, P10]
6427	16289	26449	4.28	9.0E-15	P21416	SWISSPROT	GAG POLYPROTEIN CONTAINS: CORE PROTEINS P15, P12, P30, P10]
6673	16593	26748	1.53	9.0E-15	BE003550.1	EST_HUMAN	601677750.F1 NH MGCG 21 Homo sapiens cDNA clone IMAGE:3660166.5
2760	10415		1	8.0E-15	BE261482.1	EST_HUMAN	601148632.F1 NH MGCG 19 Homo sapiens cDNA clone IMAGE:3164023.5

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Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORE SEQ ID NO:	Emission Signal	Most Similar Protein BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7663	17813		2.83	7.0E-15	AW241958.1	EST_HUMAN	xm77602.x1 Soares. NF1_T_GBCQ_S1 Homo sapiens cDNA clone IMAGE:2700463 3' similar to contains THRL2 THR repetitive element;
976	10091	20748	6.12	6.0E-15	AI271736.1	NT	Homo sapiens Xq pseudocentromeric region, segment 2/2
8622	19770		1.60	6.0E-15	AW930843.1	EST_HUMAN	OV1.LT0098-150200-070-010 L170036 Homo sapiens cDNA
5648	19415		1.57	6.0E-15	BF432200.1	EST_HUMAN	na31c12.x1 Soares. NSF_F6_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE: 3
404	10350	20177	5.70	5.0E-15	AL163208.2	NT	Homo sapiens chromosome 21 segment HS71C008
2733	12595	22490	1.38	5.0E-15	U01328.1	NT	Human hereditary haemochromatosis region, histone 2A-like protein gene, hereditary haemochromatosis (HLA-H) gene, Rofed gene, and sodium phosphate transporter (NPT3) gene, complete cds
3423	13340		1	5.0E-15	AW268817.1	EST_HUMAN	UHL-BW0-48-p-100-JL1.st NCJ CGAP. Sub9 Homo sapiens cDNA clone IMAGE:2731219 3'
8093	17941		2.22	5.0E-15	AV730093.1	EST_HUMAN	AV730093.11TF Homo sapiens cDNA clone HTFAV508 5
4201	9983	19770	2.6	4.0E-15	AL163303.2	NT	Homo sapiens chromosome 21 segment HS21C103
4090	13242	20720	0.78	4.0E-15	AL116596.1	EST_HUMAN	DXF2b761C0810.t1 761 (synonym: ham92) Homo sapiens cDNA clone DKFZb761C0810 5'
8414	19383	20623	2.38	4.0E-15	AF130941.1	NT	Homo sapiens mRNA for transcription factor
8414	19383	20624	2.35	4.0E-15	AF130941.1	NT	Homo sapiens mRNA for transcription factor
4129	14023		5.93	3.0E-15	N68452.1	EST_HUMAN	LY1123F Human fetal heart, lamella ZIP Expressa Homo sapiens cDNA clone LY1142 5' similar to ANF(CARBOVOLUME)
4843	14724		1.41	3.0E-15	P62485	SWISSPROT	NACHTSBIQUINONE OXIDOREDUCTASE CHAIN 5
4955	14832	24599	0.88	3.0E-15	AA076097.1	EST_HUMAN	7P01F03 Chromosome 7 Placental cDNA Library Homo sapiens cDNA clone 7P01F03
4955	14832	24600	0.88	3.0E-15	AA076097.1	EST_HUMAN	7P01F03 Chromosome 7 Placental cDNA Library Homo sapiens cDNA clone 7P01F03
6314	18177	29338	2.88	3.0E-15	M27685.1	NT	Mus musculus ultra high sulfur keratin gene, complete cds
6314	18177	29339	2.80	3.0E-15	M27685.1	NT	Mus musculus ultra high sulfur keratin gene, complete cds
7709	17559		1.87	3.0E-15	AA607128.1	EST_HUMAN	oc36407.st NCJ CGAP. GC031 Homo sapiens cDNA clone IMAGE:1351764 3' similar to contains MER161.1 MER19 repetitive element;
8179	18001	28311	2.71	3.0E-15	AB020395.1	NT	Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
260	10216	20033	3.26	2.0E-15	AF223391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
364	10320	20141	3.23	2.0E-15	AF223391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
364	10320	20142	3.23	2.0E-15	AF223391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
1512	11417		1.14	2.0E-15	5923201	NT	Homo sapiens hypothetical protein FLJ20212 (FLJ20212), mRNA

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3465	13381	23186	1.04	2.0E-15/AF223391.1	NT	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
3465	13381	23187	1.04	2.0E-15/AF223391.1	NT	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
4522	14415		2.07	2.0E-15/AB063335.1	EST_HUMAN	EST_HUMAN	wk706.x1 Soares_NFL_T_GSC_S1 Homo sapiens cDNA clone IMAGE:234923 3' similar to TR.Q61043 Q91043 NINEIN. ;
5097	14955	24741	1.33	2.0E-15/F13993	SWISSPROT	SWISSPROT	REPETITIVE PROLINE-RICH CELL WALL PROTEIN 2 PRECURSOR
5097	14955	24742	1.33	2.0E-15/F13993	SWISSPROT	SWISSPROT	REPETITIVE PROLINE-RICH CELL WALL PROTEIN 2 PRECURSOR
6223	15059		1.71	2.0E-15/AJ40877.1	EST_HUMAN	EST_HUMAN	Homo sapiens ASCL3 gene, CEGP1 gene, G11orf14 gene, G11orf16 gene, G11orf17 gene
6310	15173	26331	2.2	2.0E-15/AJ30405.1	EST_HUMAN	EST_HUMAN	277603.ct Soares_fetal_liver spleen, INFLS_S1 Homo sapiens cDNA clone IMAGE:460247 3'
6375	15237	26397	5.13	2.0E-15/V05064.1	EST_HUMAN	EST_HUMAN	287610.11 Soares_fetal_liver, N4FL19W Homo sapiens cDNA clone IMAGE:268075 5' similar to WP.F44F.4.8 CEG2227 TRANSPOSASE ;
7163	17040	27232	2.72	2.0E-15/D14547.1	NT	NT	Human DNA, SINE repetitive element
7410	17277	27484	1.26	2.0E-15/AJ37466.1	EST_HUMAN	EST_HUMAN	CX0-H10244-201099-078-ct12 HT0244 Homo sapiens cDNA
7410	17277	27485	1.26	2.0E-15/AJ37466.1	EST_HUMAN	EST_HUMAN	CX0-H10244-201099-078-ct12 HT0244 Homo sapiens cDNA
8312	18395		3.01	2.0E-15/AJ271735.1	NT	NT	Homo sapiens Xq pseudobisected region, segment 1.2
9799	13381	23186	2.22	2.0E-15/AF223391.1	NT	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
9799	13381	23187	2.22	2.0E-15/AF223391.1	NT	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
2747	12509		1.84	1.0E-15/AJ869994.1	EST_HUMAN	EST_HUMAN	K22003.AT NCL_CGAP_LJ024 Homo sapiens cDNA clone IMAGE:2270745 3' similar to TR.Q13359 Q13359 MAYNINER TRANSPOSASE ;
2979	12508	22706	0.8	1.0E-15/BE043594.1	EST_HUMAN	EST_HUMAN	NK4002.71 NCL_CGAP_Ov64 Homo sapiens cDNA clone IMAGE:2569162 5'
3103	13029	22825	0.99	1.0E-15/F08547	SWISSPROT	SWISSPROT	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
4262	14161	23939	0.8	1.0E-15/BE192056.1	EST_HUMAN	EST_HUMAN	RC3-H1 (0646-10060-022-005) H10649 Homo sapiens cDNA
5095	14955	24731	1.15	1.0E-15/AJ846263.1	EST_HUMAN	EST_HUMAN	wk6060.x1 NCL_CGAP_KG11 Homo sapiens cDNA clone IMAGE:249450 3'
5844	15750	25864	1.83	1.0E-15/D67053.1	EST_HUMAN	EST_HUMAN	Yv40010.11 Soares_fetal_liver spleen, INFLS_Homo sapiens cDNA clone IMAGE:120234 3' similar to contains MER6 repetitive element ;
6182	16058		1.66	1.0E-15/BE074217.1	EST_HUMAN	EST_HUMAN	QV3381 (0559-270100-074-g05) B10569 Homo sapiens cDNA
6791	16070	26962	1.28	1.0E-15/AJ163380.2	NT	NT	Homo sapiens chromosome 21 segment H521C080
6905	16783	26979	4.57	1.0E-15/AJ200676.1	EST_HUMAN	EST_HUMAN	qB9806.x1 Soares_testis, INHT Homo sapiens cDNA clone IMAGE:175527 3'
6905	16783	26977	4.57	1.0E-15/AJ200676.1	EST_HUMAN	EST_HUMAN	qB9806.x1 Soares_testis, INHT Homo sapiens cDNA clone IMAGE:175527 3'
7227	17104	27283	1.44	1.0E-15	4907208/NT	4907208/NT	Homo sapiens spermidine synthase (SPM) mRNA

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8103	18070	28331	6.81	1.0E-16	AF04083.1	NT	Homo sapiens major histocompatibility locus class III region element
9897	19402	29131	3.71	1.0E-16	AF783944.1	EST_HUMAN	431055.x1 NO1_OGAP_Ov23 Homo sapiens cDNA clone IMAGE:2218912.3 similar to contains A1u repetitive element
4004	14298	24082	1.03	9.0E-16	4803168	NT	Homo sapiens cortical infant brain cDNA clone c-2305
8391	18238	28195	2.6	9.0E-16	U08688.1	EST_HUMAN	HSC23F07 normalised infant brain cDNA clone c-2305
9343	18206	28568	1.5	7.0E-16	U088807	SWISSPROT	PEPTIDYLARGININE DEIMINASE TYPE IV (PEPTIDYLARGININE DEIMINASE IV) (PAD-R4)
8343	18206	28569	1.5	7.0E-16	U088807	SWISSPROT	PEPTIDYLARGININE DEIMINASE TYPE IV (PEPTIDYLARGININE DEIMINASE IV) (PAD-R4)
9816	18265	28616	6.6	7.0E-16	U04148.1	EST_HUMAN	PEPTIDYLARGININE DEIMINASE TYPE ALPHA
2084	11993	2084	8.32	0.0E-16	AW972011.1	EST_HUMAN	ye28c12.1 Stratiogene lung (#537210) Homo sapiens cDNA clone IMAGE:119002.5
1477	11932	21249	1.09	5.0E-16	AL261154.1	NT	ES1384702 IMAGE:resequences, MAGL Homo sapiens cDNA
2047	12514	22404	1.79	5.0E-16	AF932793.1	EST_HUMAN	Mus musculus adenylyl receptor cluster, OR37A, OR37B, OR37C, OR37E genes and OR37D pseudogene cDNA clone IMAGE:162078.3 similar to contains element L1 repetitive element
7784	17634	27897	1.69	5.0E-16	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
8500	18023	28914	3.33	5.0E-16	AF277268.1	EST_HUMAN	60189574F1 NIH MGCC 37 Homo sapiens cDNA clone IMAGE:4104129.5
8904	10385	—	8.34	5.0E-16	11418127	NT	Homo sapiens GTP binding protein 1 (GTPBP1), mRNA
2182	12019	22107	1.27	4.0E-16	AB001533.1	EST_HUMAN	Homo sapiens genes for TLEH1 and RUP2 complex and partial cds
2328	12209	22108	1.32	4.0E-16	AW79168.1	EST_HUMAN	QV1-UM0036-200300-115-002 UN0308 Homo sapiens cDNA
3411	13328	23129	3.65	4.0E-16	U10683	SWISSPROT	QV1-UM0036-200300-115-002 UN0308 Homo sapiens cDNA
4050	13952	23728	3.55	4.0E-16	BE063975.1	EST_HUMAN	MEL11010202UN03077E ULTCOPROTEIN PRECURSOR
4050	13952	23729	3.55	4.0E-16	BE063975.1	EST_HUMAN	PM4-81069-01040-002-g09 B10550 Homo sapiens cDNA
5092	14952	24737	1	4.0E-16	U08548	SWISSPROT	PM4-81069-01040-002-g09 B10550 Homo sapiens cDNA
6538	18506	28576	33.8	4.0E-16	AL163284.2	NT	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
7398	17228	27428	1.22	4.0E-16	11422181	NT	Homo sapiens chromosome 21 segment HS21C084
8551	18427	28991	1.74	4.0E-16	AF730030.1	EST_HUMAN	Homo sapiens hypothetical protein FLJ10024 (FLJ10024), mRNA
9156	18306	—	1.84	4.0E-16	U08548	SWISSPROT	AV730030 HTF Homo sapiens cDNA clone HTFAW403.5
9244	18357	—	5.94	4.0E-16	U03947.1	EST_HUMAN	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
9255	18954	28519	2.04	4.0E-16	6912459	NT	Q05947 Human pararedo like Homo sapiens cDNA clone Hs0355
128	10102	18924	1.59	3.0E-16	AW028602.1	EST_HUMAN	Homo sapiens Glu2-associated binder 2 (GUA057), mRNA
128	10102	18925	1.59	3.0E-16	AW028602.1	EST_HUMAN	dfic001.Y1 Morton Field Cochlea Homo sapiens cDNA clone IMAGE:2460376.5
489	10402	—	1.47	3.0E-16	AL046445.1	EST_HUMAN	dfic001.Y1 Morton Field Cochlea Homo sapiens cDNA clone IMAGE:2460376.5
							DNF2p-83AP037_11.834 (synonym: Hs03) Homo sapiens cDNA clone DNK7p-83AP037.5

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar BLAST Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
467	10410		1.6	3.0E-16/A135448.1	NT	NT	Homo sapiens TSX (TSX) pseudogene, exon 5
1436	11341	21207	2.01	3.0E-16/Q28983	SWISSPROT	SWISSPROT	ZENKADIESIN PRECURSOR
2646	12673	22670	4.05	3.0E-16/P03200	SWISSPROT	SWISSPROT	ENVELOPE GLYCOPROTEIN GP340 (MEMBRANE ANTIGEN (MA) [CONTAINS: GLYCOPROTEIN GP220])
3674	13785		8.18	3.0E-16/A1026903.1	NT	NT	Homo sapiens FRA3B common fragile region, diadenosine triphosphate hydrolase (FHT) gene, exon 5
3676	13786		0.99	3.0E-16/J03867.1	NT	NT	Human BX2-20 gene
4891	14741	24521	1.01	3.0E-16/A1061393.1	EST_HUMAN	EST_HUMAN	ALV951330 GLC Homo sapiens cDNA clone GLC5A07.3'
5452	15373	25431	1.41	3.0E-16/MF036231.1	NT	NT	Homo sapiens glycoprotein 3 (GP3) gene, partial cds and flanking repeat regions
7031	16008	27096	4.72	3.0E-16/A1026936.1	EST_HUMAN	EST_HUMAN	arabidopsis thaliana Stratiocarpus schottii brain S111 Homo sapiens cDNA clone IMAGE:1694185.3' similar to contains THR-b2 THR repetitive element
7691	17541		1.27	3.0E-16/BF050817.1	EST_HUMAN	EST_HUMAN	602246039F1 NIH MGCC 02 Homo sapiens cDNA clone IMAGE:4332032.5'
7698	17573	27622	3.08	3.0E-16/J178910.1	NT	NT	Homo sapiens ADP/ATP carrier protein (ANT-2) gene, complete cds
956	10860		1.18	2.0E-16/AL16379.2	NT	NT	Homo sapiens chromosome 21 segment HS21C076
2337	12217		0.96	2.0E-16/A1421761.1	EST_HUMAN	EST_HUMAN	ad66401.1 Source: testis, NIH Homo sapiens cDNA clone IMAGE:1090855.3'
2667	12924		1.71	2.0E-16/J03951.1	NT	NT	Human SSAN-related endogenous retroviral (L)TR-like element
4087	13907	23764	1.33	2.0E-16/J09211.1	NT	NT	H sapiens DNA for endogenous retroviral like element
6646	18526	26720	1.63	2.0E-16/A172397.1	EST_HUMAN	EST_HUMAN	1947061.5 NCL_QGAP_P412 Homo sapiens cDNA clone IMAGE:1200947 similar to TR-054649 054649 HYPOTHETICAL_429 TO PROTEIN [2] TR-086045 contains MER11 L1 UER1 repetitive element
178	10148	19693	2.50	1.0E-16/A1720719.1	NT	NT	Homo sapiens pituitary tumor transforming gene protein (PTTG) gene, complete cds
377	10361		22.41	1.0E-16/A162892.1	EST_HUMAN	EST_HUMAN	cds0911.1 Source: testis, NIH Homo sapiens cDNA clone IMAGE:1094064.3' similar to contains OFR12 OFR repetitive element
1828	11523	21704	2.44	1.0E-16/J1727942.1	EST_HUMAN	EST_HUMAN	Q160-N01076-07070-255-410 BNG148 Homo sapiens cDNA
5977	15733		23.72	1.0E-16/J49983.1	NT	NT	Homo sapiens OCB6 chemokine receptor (CMK6R) gene, complete cds
5960	15956	25987	2.81	1.0E-16/J02779	SWISSPROT	SWISSPROT	MITOGEN-ACTIVATED PROTEIN KINASE KINASE 10 (MIXED LINEAGE KINASE 2) (PROTEIN KINASE MS1)
6168	15783		6.99	1.0E-16/J16965.1	NT	NT	Homo sapiens OCB6 chemokine receptor (CMK6R) gene, complete cds
7349	17217	27416	1.31	1.0E-16/AW676951.1	EST_HUMAN	EST_HUMAN	Q162-P01012-040400-124-403 PT0012 Homo sapiens cDNA
3679	13503		2.54	0.0E-17/AW000048.1	EST_HUMAN	EST_HUMAN	GM1-N1003-200300-133-401 NT003 Homo sapiens cDNA
6035	15938		2.02	9.0E-17/A1302964.1	EST_HUMAN	EST_HUMAN	162211.1 NCL_QGAP_CL11 Homo sapiens cDNA clone IMAGE:2108924.3' similar to contains MER28.12 MER28 repetitive element
6720	19300		4.87	9.0E-17/AW150257.1	EST_HUMAN	EST_HUMAN	xp16912.1 NCL_QGAP_U1 Homo sapiens cDNA clone IMAGE:2500950.3' similar to contains OFR12 OFR12 repetitive element

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## Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit ELASTE Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7870	17720		2.18	8.0E-17	AF200719.1	NT	Homo sapiens pituitary tumor transforming gene protein (PTTG) gene, complete cds
1001	10519		0.87	8.0E-17	AY183070.1	EST_HUMAN	QY0-010032-080300-185-401 OT1032 Homo sapiens cDNA
3817	13739		0.87	8.0E-17	AL163280.2	NT	Homo sapiens chromosome 21 segment HS21C080
9427	10444	26402	3.66	8.0E-17	BE172081.1	EST_HUMAN	MRO-H10599-000900-003-004 HT10559 Homo sapiens cDNA
6311	16174		1.38	8.0E-17	AY175075.1	EST_HUMAN	AV1750759 HT17 Homo sapiens cDNA clone HTFAQ307.5
1442	11347		3.18	7.0E-17	6753097	NT	Mus musculus splicing protein B editing complex 2 (Apoec2), mRNA
5282	15184		3.05	7.0E-17	AF216850.1	NT	Homo sapiens putative MTAP (MTAP) mRNA, partial cds, alternatively spliced
8017	19921	20052	8.83	7.0E-17	AF223943.1	NT	Mus musculus VINT-2 gene, partial cds; putative activin-related protein and cyto fibrillar transmembrane conductance regulator (CFTR) genes, section 1, of 2 of the complete cds, and unknown gene
198	10168	19998	4.78	8.0E-17	AY963950.1	EST_HUMAN	RC1-HH0009-220302-021-504 HN0303 Homo sapiens cDNA
5912	16717	26830	1.81	8.0E-17	AW92772.1	EST_HUMAN	h67404.x1 Soares_NFL_T_C9C_57 Homo sapiens cDNA clone IMAGE:287855 5' similar to contains L112
415	10952	19773	2.31	5.0E-17	TE4410.1	EST_HUMAN	h28306.x1 Soares_NFL_T_C9C_57 Homo sapiens cDNA clone IMAGE:289327 5'
8476	16335	28902	2.07	5.0E-17	TE1043.1	EST_HUMAN	h28304.x1 Soares_fetal liver spleen (NLS) Homo sapiens cDNA clone IMAGE:109327 5'
8783	18598	28987	2.12	4.0E-17	AL163247.2	NT	Homo sapiens chromosome 21 segment HS21C047
8171	18914		1.88	4.0E-17	AI078548.1	EST_HUMAN	h45504.x1 Soares_fetal HT1 Homo sapiens cDNA clone IMAGE:1640286 5' similar to TRQ16530
2051	11941	21836	1.35	3.0E-17	AY169123.1	EST_HUMAN	CI0650 PMS3 mRNA, contains MIER102 MIER102 repetitive element
3157	13082		1.31	3.0E-17	P35410	SWISSPROT	h489049.x1 Soares_NFL_T_C9C_57 Homo sapiens cDNA clone IMAGE:2864784 3'
3520	13504	23293	1.14	3.0E-17	BE326522.1	EST_HUMAN	h489044.x1 NCL_OGAP_Luz4 Homo sapiens cDNA clone IMAGE:3181699 3'
3520	13504	23294	1.14	3.0E-17	BE326522.1	EST_HUMAN	h489044.x1 NCL_OGAP_Luz4 Homo sapiens cDNA clone IMAGE:3181699 3'
7594	17445	27690	4.72	3.0E-17	AB026898.1	NT	Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL4 genes, complete cds)
9134	18860		3.16	3.0E-17	11417069	NT	Homo sapiens SECT14 (S. cerevisiae)-like 2 (SECT14L2), mRNA
9609	19368		15.82	3.0E-17	AY172004.1	EST_HUMAN	AY172004 G LIC Homo sapiens cDNA clone IMAGE:1959822 3' similar to contains ALU
350	10309	20127	2.81	2.0E-17	AI270080.1	EST_HUMAN	qf3306.x1 NCL_OGAP_Ess2 Homo sapiens cDNA clone IMAGE:1959922 3' similar to contains ALU repetitive element
351	13009	20127	2	2.0E-17	AI270080.1	EST_HUMAN	qf3306.x1 NCL_OGAP_Ess2 Homo sapiens cDNA clone IMAGE:1959922 3' similar to contains ALU repetitive element
9572	10586		1.97	2.0E-17	AY125932.1	EST_HUMAN	h281404.x1 Soares_fetal heart_NHHT19W Homo sapiens cDNA clone IMAGE:3907571 3'
12776	22170		2.8	2.0E-17	Q20983	SWISSPROT	ZONADHESIN PRECURSOR
2397	12279	22171	2.8	2.0E-17	Q20983	SWISSPROT	ZONADHESIN PRECURSOR

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Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon ID NO.	ORF SEQ ID NO.	Expression Signal	Mean Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2869	13226	23821	5.62	2.0E-17	P12038	SWISSPROT	NEUROFILAMENT TRIPLET H PROTEIN (200 KDA NEUROFILAMENT PROTEIN) (NEUROFILAMENT HEAVY POLYPEPTIDE) (NFH)
5295	15216	25017	1.95	2.0E-17	M27895.1	NT	Mus musculus ultra high sulfur keratin gene, complete cds
5295	15216	25018	1.95	2.0E-17	M27895.1	NT	Mus musculus ultra high sulfur keratin gene, complete cds
5790	15696	26779	2.07	2.0E-17	AF050066.1	NT	Homo sapiens MHC class I region
6711	16591	26779	1.44	2.0E-17	Q85156	SWISSPROT	Homo sapiens MHC class I region
6925	16803	26997	1.38	2.0E-17	AA33040.1	EST_HUMAN	OLFATORY RECEPTOR-LIKE PROTEIN OLJ3
7659	17549	27772	2.72	2.0E-17	AL163247.2	NT	EST13504 Testis tumor Homo sapiens cDNA 5' and similar to similar to glycogenin
7699	17549	27773	2.72	2.0E-17	AL163247.2	NT	Homo sapiens chromosome 21 segment HS21C047
7887	17737	27981	5.3	2.0E-17	D13391.1	NT	Human CYP19 gene for aromatase cytochrome P-450, promoter region (containing two cis-acting transcriptional regulatory elements)
793	10695	20469	3.37	1.0E-17	P08183	SWISSPROT	MULTIDRUG RESISTANCE PROTEIN 1 (P-GLYCOPROTEIN 1)
1720	11850	21469	2.45	1.0E-17	AL183027.2	NT	Homo sapiens chromosome 21 segment HS21C007
2059	11859	21853	1.98	1.0E-17	P02461	SWISSPROT	COLLAGEN ALPHA 1(III) CHAIN PRECURSOR
2287	12170	22087	1.46	1.0E-17	U79410.1	NT	Homo sapiens fibronectin 2 (FN2) gene, promoter region and exons 1A and 1B
3519	13435		1.01	1.0E-17	AF224693.1	NT	Homo sapiens mannosidase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2 3 (UBE2D) genes, complete cds
4045	13947		7.17	1.0E-17	R05942.1	EST_HUMAN	U00071.1 Scores full length cyp19a1 NF1L5 Homo sapiens cDNA clone IMAGE:2521512.3 similar to contains Alu repetitive element; contains LTR&LTR negative element;
5885	15792		4.7	1.0E-17	AW439468.1	EST_HUMAN	q65505.x1 Scores: full length, NPH.19W Homo sapiens cDNA clone IMAGE:174925.5
6005	15911	20037	1.44	1.0E-17	AT185942.1	EST_HUMAN	q65505.x1 Scores: full length, NPH.19W Homo sapiens cDNA clone IMAGE:174925.5
6005	15911	20038	1.44	1.0E-17	AT185942.1	EST_HUMAN	q65505.x1 Scores: full length, NPH.19W Homo sapiens cDNA clone IMAGE:174925.5
6216	16682	26521	1.32	1.0E-17	Q176831	SWISSPROT	URIDINE PHOSPHORYLASE (URPASE)
6719	16596	26821	2.01	1.0E-17	Q28624	SWISSPROT	MYOSIN LIGHT CHAIN KINASE, SMOOTH MUSCLE (MCK) (CONTAINS: TELOKIN)
2421	12299	22186	0.96	9.0E-19	AA174078.1	EST_HUMAN	z191412.1 Strategic full length 197202 Homo sapiens cDNA clone IMAGE:60682.3
7468	17528		3.26	9.0E-18	AA172107.1	EST_HUMAN	q65003.x1 Scores: NSF_F9_0T_PA_P_S1 Homo sapiens cDNA clone IMAGE:214839.3
3718	13630	23415	1.75	8.0E-18	475997	NT	Homo sapiens protein tyrosine phosphatase, non-receptor type substrate 1 (PTPNS1) mRNA
346	10305	20121	8.39	7.0E-18	AW316976.1	EST_HUMAN	xt10004.x1 NOL_OGAP_Pant Homo sapiens cDNA clone IMAGE:283707.1 similar to g0L20668 60S
346	10305	20122	8.39	7.0E-18	AW316976.1	EST_HUMAN	xt10004.x1 NOL_OGAP_Pant Homo sapiens cDNA clone IMAGE:283707.1 similar to g0L20668 60S
5193	15003	24774	0.85	7.0E-18	R15220.1	EST_HUMAN	y48407.s1 Scores infant brain T1B1 Homo sapiens cDNA clone IMAGE:53285.3 similar to contains L1 repetitive element;

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Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (10p) HIT BLAST Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9638	10305	20121	5.73	7.0E-18	AW316976.1	EST_HUMAN	ixt0604.x1 NGL_CGAP_Pan1 Homo sapiens cDNA clone IMAGE:2837071 3' similar to gb1.20868.60S
9638	10305	20122	5.73	7.0E-18	AW316976.1	EST_HUMAN	RIBOSOMAL PROTEIN L4 (HUMAN);
3255	13178	22676	1.16	6.0E-18	X71791.2	NT	ixt0604.x1 NGL_CGAP_Pan1 Homo sapiens cDNA clone IMAGE:2837071 3' similar to gb1.20868.60S
4641	14529		3.37	6.0E-18	P42181	SWISSPROT	RIBOSOMAL PROTEIN L4 (HUMAN); Ratios: non-specific partial Glnm7-3 gene for glia-derived matrix proteinase hevin 1, enhancer region
8799	18978						PROTEIN-GLUTAMINE GAMMA-GLUTAMYLTRANSFERASE (T ISSUE: TRANSLUTAMINASE)
8475	18349	28614	1.75	6.0E-18	11428166	NT	(TGASE O) (TGO)
8642	18936	28784	1.78	6.0E-18	X87344.1	NT	Homo sapiens similar to high-mobility group (nucleosome chromosomal) protein 4 (H. sapiens) (LOC33440).
9594	19052	25308	3.65	6.0E-18	U57928.1	NT	mRNA
1130	11044	20886	14.74	5.0E-18	A128021.1	EST_HUMAN	Homo sapiens chromosome 21 segment H3210345
4217	14115	23953	0.92	5.0E-18	1044665	NT	H. sapiens DIMA, DIMB, HLA-21, IIP2, LMP2, TAP1, LMP7, TAP2, DOB, DOB2 and RING3, 9, 13 and 14 genes
5058	14628	24700	1.76	6.0E-18	D61517.1	EST_HUMAN	Human acylate hydratase (ACD) gene, exon 4
6224	15147	24914	1.38	6.0E-18	AF037613.1	NT	Similar to conserved Atp repeat element
7081	18938	27128	4.26	6.0E-18	BE143312.1	EST_HUMAN	HUMH117008 Cortical human fetal brain poly(A)- mRNA (58595) Homo sapiens cDNA clone GEN-411F05 3'
8346	18223	29474	4.33	6.0E-18	10242278	NT	Human endogenous retrovirus HERV-5.147D
8346	18223	29475	4.33	6.0E-18	10242278	NT	NFQ-H10161-221099-002-505 H10161 Homo sapiens cDNA
9612	19126		6.3	6.0E-18	AW697182.1	EST_HUMAN	Homo sapiens lymphocyte activation-associated protein (LOC31089), mRNA
9637	15335		13	6.0E-18	A180547.1	EST_HUMAN	Homo sapiens lymphocyte activation-associated protein (LOC31089), mRNA
110	10095	19915	1.36	4.0E-18	BE044076.1	EST_HUMAN	MT1-SN0036-069400-001-411 SN0036 Homo sapiens cDNA
119	10099	19916	1.36	4.0E-18	BE044076.1	EST_HUMAN	AV050547 GLO_Homo sapiens cDNA clone GLC00402 3'
1945	11742		1.09	4.0E-18	A1735592.1	EST_HUMAN	h036104.x1 NGL_CGAP_LH1 Homo sapiens cDNA clone IMAGE:3039511 3' similar to contains MER29.b3
2161	12042	21940	0.98	4.0E-18	Q60430	SWISSPROT	h036104.x1 NGL_CGAP_LH1 Homo sapiens cDNA clone IMAGE:3039511 3' similar to contains MER29.b3
2154	12042	21941	0.98	4.0E-18	Q60430	SWISSPROT	h036104.x1 NGL_CGAP_LH1 Homo sapiens cDNA clone IMAGE:3039511 3' similar to contains MER29.b3
5293	16214	25014	2.55	4.0E-18	A1071695.1	EST_HUMAN	h036104.x1 NGL_CGAP_LH1 Homo sapiens cDNA clone IMAGE:3039511 3' similar to contains MER29.b3



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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5293	18214	25015	2.55	4.0E-18	A017565.1	EST_HUMAN	α22α3.6 x1 Scores, NFL_T_GBC ST Homo sapiens cDNA clone IMAGE:1627138 3' EST18933 Pituitary gland, subcloned (proliferating growth hormone) Homo sapiens cDNA 5' and similar to EST containing O family repeat
8370	18247	28499	7.12	4.0E-18	AA37187.1	EST_HUMAN	α22911 x1 NCL CGAP K46 Homo sapiens cDNA clone IMAGE:1324381 3' similar to SW:R55_HUMAN
531	10768	20600	2.38	3.0E-18	AA81198.1	EST_HUMAN	P47822 AS RIBOSOMAL PROTEIN S5 ;
914	10838	20866	2.41	3.0E-18	BE05934.1	EST_HUMAN	CluB2 OT060-21(300-289-p27 BT060) Homo sapiens cDNA
3867	13778	23671	1.10	3.0E-18	AL16247.2	NT	Homo sapiens chromosome 21 segment HS21047
6984	18029	28169	5.2	3.0E-18	BE01071.1	EST_HUMAN	P46-BX0081-100300-201-108 BX0081 Homo sapiens cDNA
9842	18210	28169	4.02	3.0E-18	AW022015.1	EST_HUMAN	MS112.11 Homo Fetal Cochlea Homo sapiens cDNA clone IMAGE:2485726 5'
251	10217	20034	2.83	2.0E-18	AW838900.1	EST_HUMAN	QY4L10038-10020-075-267 L10038 Homo sapiens cDNA
1135	11049		47.22	2.0E-18	BE250097.1	EST_HUMAN	6011143521 NH1_MGC_16 Homo sapiens cDNA clone IMAGE:335044 5'
6322	18242		3.2	2.0E-18	AA869510.1	EST_HUMAN	α143907 x1 Scores, Iga4b_NH1 Homo sapiens cDNA clone IMAGE:140952 3' similar to TR-O14577
5380	18239	25149	3.04	2.0E-18	D14547.1	NT	O14577 BAC CLONE NG114406 FROM T031, COMPLETE SEQUENCE ;
5390	18239	25150	3.04	2.0E-18	D14547.1	NT	Human DNA, SINE repetitive element
5985	15500		1.67	2.0E-18	BF347220.1	EST_HUMAN	H0202110471 NCL CGAP Bm07 Homo sapiens cDNA clone IMAGE:4156870 5'
5814	16720	25934	3.53	2.0E-18	AW695853.1	EST_HUMAN	h049d1.x1 Scores, NFL_T_GBC ST Homo sapiens cDNA clone IMAGE:237954 3' similar to contains MER10.12
7779	17629	27861	1.53	2.0E-18	AW151673.1	EST_HUMAN	h07e10.x1 NCL CGAP Gas4 Homo sapiens cDNA clone IMAGE:2623146 3' similar to contains MER10.12
7778	17629	27862	1.53	2.0E-18	AW151673.1	EST_HUMAN	MER10 repetitive element ;
8340	18217	28499	5.32	2.0E-18	AW470791.1	EST_HUMAN	h033306.x1 NCL CGAP K412 Homo sapiens cDNA clone IMAGE:2630728 3' similar to contains THR13
8698	18774	29055	4.44	2.0E-18	AW151396.1	EST_HUMAN	h07e10.x1 NCL CGAP UT Homo sapiens cDNA clone IMAGE:2875490 3' similar to contains MER10.12
9375	17049		3.15	2.0E-18	BC250037.1	EST_HUMAN	h033306.x1 NCL CGAP UT Homo sapiens cDNA clone IMAGE:2630728 3' similar to contains THR13
4318	14215		1.02	1.0E-18	T05406.1	EST_HUMAN	h033306.x1 NCL CGAP UT Homo sapiens cDNA clone IMAGE:2875490 3' similar to contains MER10.12
5286	15208		2.38	1.0E-18	AV553405.1	EST_HUMAN	h033306.x1 NCL CGAP UT Homo sapiens cDNA clone IMAGE:2875490 3' similar to contains MER10.12
5419	18340		1.97	1.0E-18	D00066.1	NT	h033306.x1 NCL CGAP UT Homo sapiens cDNA clone IMAGE:2875490 3' similar to contains MER10.12
5419	18340		25365	1.97	1.0E-18	D00066.1	h033306.x1 NCL CGAP UT Homo sapiens cDNA clone IMAGE:2875490 3' similar to contains MER10.12
5883	15790		1.32	1.0E-18	AL162980.2	NT	h033306.x1 NCL CGAP UT Homo sapiens cDNA clone IMAGE:2875490 3' similar to contains MER10.12



Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) HI BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3719	13960	23476	1.74	3.0E-16	C26697	SWISSPROT	BETA-2 ADRENERGIC RECEPTOR
3719	13960	23476	1.74	3.0E-16	C26697	SWISSPROT	BETA-2 ADRENERGIC RECEPTOR
4345	14242	24024	1.18	3.0E-16	AY0708136.1	EST_HUMAN	AY0708136 ADG Homo sapiens cDNA clone ADCA4M11.5'
6370	16232	26945	2.47	3.0E-16	11432214	NT	Homo sapiens similar to adic-keto reductase family 1, member B11 (aldose reductase-like) (H. sapiens)
7443	16456	26945	1.23	3.0E-16	X89085.1	NT	LOC55223.1 mRNA
9419	19096	22279	7.38	3.0E-16	AF166520.1	NT	Mus musculus mRNA for TPOC33 protein
2613	12387	22279	17.57	2.0E-16	AL163201.2	NT	Homo sapiens phospholamban 1 protein (PLB) mRNA, complete cds
6849	16726	20923	8.95	2.0E-16	AA012654.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS210091
473	10417		1.6	1.0E-16	BE409611.1	EST_HUMAN	3x3cd09.1 Scores refseq NM244787 Homo sapiens cDNA clone IMAGE:360950.5'
2119	12007	21006	1.4	1.0E-16	H30795.1	EST_HUMAN	8013041287 NIH IMGC-21 Homo sapiens cDNA clone IMAGE:3638310.5'
2685	12950		2.89	1.0E-16	D38044.1	NT	y07907.1 Scores adult brain M24H4857 Homo sapiens cDNA clone IMAGE:184168.5' similar to contains MER10 repetitive element;
2817	12746		6.03	1.0E-16	4759677	NT	Human gene for Ab-receptor, exon 7-9
3355	13274	23075	1.27	1.0E-16	AA434697.1	EST_HUMAN	Homo sapiens protein tyrosine phosphatase, non-receptor type substrate 1 (PTPNS1) mRNA
5751	15509	25711	2.37	1.0E-16	U12186.1	NT	g46b72.51 Scores, testis, NHT Homo sapiens cDNA clone IMAGE:1909631.5' similar to contains MER37.2
5819	16797	26930	1.79	1.0E-16	M94657.1	NT	MER37 repetitive element;
7076	16883		2.83	1.0E-16	T69020.1	EST_HUMAN	Cryptidag cunicularis sodium butyrate cotransporter mRNA, partial cds
7657	17703	27948	28.21	1.0E-16	AY1812269.1	EST_HUMAN	Rabbit phosphotyrosine kinase beta subunit mRNA, complete cds
6005	15910	26036	2.22	8.0E-20	T657265	NT	y072502.1 Scores fetal liver spleen, INFLS Homo sapiens cDNA clone IMAGE:123243.5' similar to contains OFR repetitive element;
6439	16300	26402	1.31	8.0E-20	A22137.1	EST_HUMAN	RCQ-5T0174-191050-031-X05 ST0174 Homo sapiens cDNA
6439	16300	26402	1.31	8.0E-20	A22137.1	EST_HUMAN	Y541609.1 Scores melanocyte 2N4HM Homo sapiens cDNA clone IMAGE:272872.5'
3238	13161	22981	0.89	7.0E-20	BF326455.1	EST_HUMAN	Mus musculus keratin-associated protein 9-1 (Krtap9-1), mRNA
6178	15133	24982	5.83	7.0E-20	AL138120.1	EST_HUMAN	Mus musculus keratin-associated protein 9-1 (Krtap9-1), mRNA
6947	16925	27018	10.09	7.0E-20	AA567957.1	EST_HUMAN	g96909.31 Scores, NFL-T, GBC, S1 Homo sapiens cDNA clone IMAGE:1842089.3'
6347	16925	27019	10.96	7.0E-20	AA567957.1	EST_HUMAN	g96909.31 Scores, NFL-T, GBC, S1 Homo sapiens cDNA clone IMAGE:1842089.3'
5932	16759		10.45	7.0E-20		EST_HUMAN	PKM-AN0096-05000-0303-404 AN0096 Homo sapiens cDNA
3508	13424	23277	3.95	6.0E-20	P39168	SWISSPROT	DKF45470992.11.1AT (synonym: ttfir1) Homo sapiens cDNA clone DKF254D092.5'
							H46604.61 NGL CGAP P44 Homo sapiens cDNA clone IMAGE:1043718 similar to contains MER230.32
							MER230 repetitive element;
							H46604.61 NGL CGAP P44 Homo sapiens cDNA clone IMAGE:1043718 similar to contains MER200.32
							MER200 repetitive element;
							Homo sapiens recombinant protein 13a (RPI13A), mRNA
							ALU SUBFAMILY J SEQUENCE CONTAMINATION WARNING ENTRY

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Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Meat Similar (Top) HPI BLAST Value	Top HPI Accession No.	Top HPI Database Source	Top Hit Descriptor
4175	14075	23950	2.95	6.0E-20	BE62243.1	EST_HUMAN	60144121 F1 NH1_MGC_72 Homo sapiens cDNA clone IMAGE:3916231 5'
4491	14385		1.17	5.0E-20	AN72523.1	EST_HUMAN	A17735123 HTC Homo sapiens cDNA clone HICGTAD1 5'
6634	16514	25704	4.95	5.0E-20	W90525.1	EST_HUMAN	4176406 s1 Soares fetal liver spleen (NH1.S. S1) Homo sapiens cDNA clone IMAGE:418161 5' similar to contains MER30.11 MER30 repetitive element ;
6634	16514	29705	4.95	5.0E-20	W90525.1	EST_HUMAN	4176406 s1 Soares fetal liver spleen (NH1.S. S1) Homo sapiens cDNA clone IMAGE:418161 5' similar to contains MER30.11 MER30 repetitive element ;
7128	17005	27197	1.44	5.0E-20	AB02874.1	NT	[Mus musculus] MMAG-2 mRNA, complete cds ;
7128	17005	27198	1.44	5.0E-20	AB02874.1	NT	[Mus musculus] MMAG-2 mRNA, complete cds ;
6624	19504		9.03	4.0E-20	A187459.1	EST_HUMAN	4254503 s1 NCL_OGAP_O363 Homo sapiens cDNA clone IMAGE:2290398 3'
7695	17845	28037	1.17	4.0E-20	AW037409.1	EST_HUMAN	U134-D130-183-05020-080-04 D10043 Homo sapiens cDNA
2022	11981	21878	1.04	3.0E-20	U03884.1	NT	Human BXP21 gene
4115	14015	23795	1.99	3.0E-20	P23273	SWISSPROT	OLEFACTORY RECEPTOR-LIKE PROTEIN IT4
4524	14417	24201	0.96	3.0E-20	AA037616.1	EST_HUMAN	2636012 s1 Soares_pregnant_uterus_NbHFU Homo sapiens cDNA clone IMAGE:484993 3' similar to contains L12 L1 repetitive element ;
7172	17049		3.35	3.0E-20	D14547.1	NT	Human DNA, SINE repetitive element
8055	17046		2.08	3.0E-20	P11309	SWISSPROT	RETROVIRUS-RELATED POL. POLYPROTEIN [CONTAINS: REVERSE TRANSCRIPTASE ;
9165	18929	25532	5.37	3.0E-20	5E898422.1	EST_HUMAN	601514180 F1 NH1_MGC_71 Homo sapiens cDNA clone IMAGE:3915522 5'
813	10741		4.52	2.0E-20	AW303968.1	EST_HUMAN	P27461 405 RIBOSOMAL PROTEIN S5 ;
1095	11011	20952	2.03	2.0E-20	AA516335.1	EST_HUMAN	P99909 s1 NCL_OGAP_Lip2 Homo sapiens cDNA clone IMAGE:940097 similar to TR.G1224068
1095	11011	20952	2.03	2.0E-20	AA516335.1	EST_HUMAN	G1224068 ORF2: FUNCTION UNKNOWN ;
1095	11011	20952	2.03	2.0E-20	AA516335.1	EST_HUMAN	P09909 s1 NCL_OGAP_Lip2 Homo sapiens cDNA clone IMAGE:940097 similar to TR.G1224068
2795	10741		2.72	2.0E-20	AW303968.1	EST_HUMAN	G1224068 ORF2: FUNCTION UNKNOWN ;
4895	14746	24525	4.32	2.0E-20	Q28683	SWISSPROT	P97461 405 RIBOSOMAL PROTEIN S5 ;
4895	14746	24526	4.32	2.0E-20	Q28683	SWISSPROT	ZONADHESIN PRECURSOR
5000	14990		11.35	2.0E-20	5174538	NT	Human sapiens relate dehydrogenase 1, NAD (soluble) (MDH1) mRNA
7301	17177	27378	2.95	2.0E-20	D10083.1	NT	Human sapiens RGH1 gene, retrovirus-like element
7301	17177	27379	2.95	2.0E-20	D10083.1	NT	Human sapiens RGH1 gene, retrovirus-like element
8953	18797	29089	1.95	2.0E-20	AA1768755.1	EST_HUMAN	945508 s1 NCL_OGAP_G081 Homo sapiens cDNA clone IMAGE:1309535 3' similar to contains MER4.62



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Table 4

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5109	14877		0.96	5.0E-21	207975.1	NT	Human sapiens DNA for amyloid precursor protein, complete cds
1701	11602	21473	1.24	4.0E-21	AA670713.1	EST_HUMAN	065608.s1 NCL CGAP_K465 Homo sapiens cDNA clone IMAGE:197304 3' similar to TRQ16530 O16530
9106	16000	26738	3.06	4.0E-21	AB019876.1	NT	PM53 MRNA contains ORF, 11 ORF repetitive element;
2228	12113	22015	1.00	3.0E-21	AL163201.2	NT	Rattus norvegicus mRNA for rTm, complete cds
3041	12698	22762	4.04	3.0E-21	AJ07073.1	NT	Human sapiens chromosome 21 segment HS21C031
5749	16697		1.79	3.0E-21	BF184739.1	EST_HUMAN	Human sapiens LGM228 gene
6205	15995	28100	4.79	3.0E-21	BF31739.1	EST_HUMAN	601844465.F1 NH_MGC_541 Homo sapiens cDNA clone IMAGE:4064945 5'
7699	17440	27560	1.65	3.0E-21	AF180700.1	EST_HUMAN	RC1-OT0083-100800-016-g03 OT0083 Homo sapiens cDNA
6594	19072	24992	1.32	3.0E-21	AL163213.2	EST_HUMAN	OM1-NN0063-280400-203-b03 NN0063 Homo sapiens cDNA
140	10114		14.75	2.0E-21	BE16347.1	EST_HUMAN	Human sapiens chromosome 21 segment HS21C013
919	10943	20598	0.95	2.0E-21	AB007897.2	NT	QV3-170458-170200-050-x12 HT0463 Homo sapiens cDNA
919	10943	20598	0.95	2.0E-21	AB007897.2	NT	Human sapiens mRNA for K040397 protein, partial cds
1199	11109		2.99	2.0E-21	BE04410.1	EST_HUMAN	Human sapiens mRNA for K040397 protein, partial cds
2650	12469	22361	2.89	2.0E-21	Q28993	SWISSPROT	RCB11031-T141189-011-008 B10311 Homo sapiens cDNA
2650	12469	22362	2.89	2.0E-21	Q28993	SWISSPROT	ZONADHESIN PRECURSOR
8370	15200	25126	1.77	2.0E-21	AA62452.1	EST_HUMAN	ts3003.s1 NCL CGAP_Pan1 Homo sapiens cDNA clone IMAGE:230109 3' similar to TR_Q99854 Q99854
8570	16749	26944	4.96	2.0E-21	BE141765.1	EST_HUMAN	HYPOPHYSAL 61.1 KD PROTEIN;
7122	16669	27190	3.43	2.0E-21	AU139719.1	EST_HUMAN	QV0-HT07103-081189-050-g11 HT0703 Homo sapiens cDNA
8412	18287		1.88	2.0E-21	BE350127.1	EST_HUMAN	AU139719 PLACE1 Homo sapiens cDNA clone IMAGE:1006592 5'
8656	18601	28776	1.92	2.0E-21	BE973929.1	EST_HUMAN	MER29 repetitive element;
8656	18601	28777	1.92	2.0E-21	BE973929.1	EST_HUMAN	100901.s1 NCL CGAP_K413 Homo sapiens cDNA clone IMAGE:3146293 3' similar to contains MER29 b3
9425	19072		6.13	2.0E-21	AF17615.1	NT	601600056.F1 NH_MGC_53 Homo sapiens cDNA clone IMAGE:3951038 5'
1335	11142	20964	1.98	1.0E-21	AA567067.1	EST_HUMAN	601600056.F1 NH_MGC_53 Homo sapiens cDNA clone IMAGE:3951038 5'
1335	11280		2.46	1.0E-21	AB001284.1	EST_HUMAN	Human sapiens putative 2-hydroxyquinoline DNA glycosylase gene, complete cds
5907	15813		2.43	1.0E-21	AL079762.1	EST_HUMAN	Human sapiens putative 2-hydroxyquinoline DNA glycosylase gene, complete cds
6269	16134	26289	4.43	1.0E-21	AU23104.1	EST_HUMAN	nr6604.s1 NCL CGAP_P44 Homo sapiens cDNA clone IMAGE:1043718 similar to contains MER29 b2
8021	17871		1.49	1.0E-21	AF223104.1	EST_HUMAN	nr6604.s1 NCL CGAP_P44 Homo sapiens cDNA clone IMAGE:1043718 similar to contains MER29 b2
4312	14209	23993	2.55	9.0E-22	AU702438.1	EST_HUMAN	ar82012.x1 Barislated cdon HPLRB7 Homo sapiens cDNA clone IMAGE:2152343 3'
							DKF749410830.1 t1434 (synonym: hta33) Homo sapiens cDNA clone DKF749410830 5'
							qna7205.x1 Source: testis, testis_NHT1 Homo sapiens cDNA clone IMAGE:1838338 3' similar to gb:AF42411 QM
							PROTEIN HUMAN;
							Human sapiens SET domain and marlin transposase fusion gene (SETMAR) mRNA
							294403.s1 NCL CGAP_Kid11 Homo sapiens cDNA clone IMAGE:229204 3' similar to TR_Q15408 Q15408
							NEUTRAL PROTEASE LARGE SUBUNIT;

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Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7002	19879	2707C	1.26	9.0E-22	AL163201.2	NT	Homo sapiens chromosome 21 segment HS21C001
7002	19879	2707C	1.26	9.0E-22	AL163201.2	NT	Homo sapiens chromosome 21 segment HS21C001
7071	18599	28039	3.55	9.0E-22	AV761874.1	EST HUMAN	AV761874 MDS Homo sapiens cDNA clone MDSGCC05 5'
8845	18763	29048	2.92	9.0E-22	AU140358.1	EST HUMAN	AU140358 PLACE22 Homo sapiens cDNA clone PLACE2200384 5'
8997	1880C		2.39	9.0E-22	97902360	EST	Mia muscle T1-T1 cell apoptosis related protein-15 (T1r15), mRNA
933	10659		4.55	8.0E-22	BE14746.1	EST HUMAN	CAC-RT10719-281099-076-H05 H10719 Homo sapiens cDNA
939	16489		3.8	8.0E-22	AA04502.1	EST HUMAN	2307A03.1 Soares, pregnant, uterus, NH-PU Homo sapiens cDNA
946	10585	20401	4.23	7.0E-22	AL163249.2	NT	Homo sapiens chromosome 21 segment HS21C046
4165	14085	23851	2.32	7.0E-22	Q61838	SWISSPROT	ALPHA-2-MACROGLOBULIN PRECURSOR (ALPHA2M)
4560	14844	24613	1.18	7.0E-22	AB038881.1	NT	Homo sapiens gene for activin receptor type IIB, complete cds
7044	16821		1.34	7.0E-22	AF151054.1	NT	Homo sapiens HSPC220 mRNA, complete cds
7127	17004	27196	2.63	7.0E-22	AF151054.1	EST HUMAN	EST100785 Fetal brain, Striatum (cat536203) Homo sapiens cDNA clone HFGC-F07
7539	17389	27589	1.68	7.0E-22	AF009890.1	NT	Homo sapiens T cell receptor beta locus, TOR3/75342 to TOR3/1252 region
8799	16873		1.83	8.0E-22	AI029123.1	EST HUMAN	W05907.x1 NCI CGAP, G441 Homo sapiens cDNA clone IMAGE:408434 5'
9271	15632	23555	2.85	9.0E-22	AL153033.2	NT	Homo sapiens chromosome 21 segment HS21C03
7912	17762	28001	3.37	8.0E-22	U56322.1	NT	Human dyshemoglobin (DM) gene, exons 7, 8 and 9, and partial cds
9645	19213		2.03	5.0E-22	BF17351.1	EST HUMAN	ncs206b.x1 NCI CGAP, P128 Homo sapiens cDNA clone IMAGE:325569 5' similar to contains Alu repetitive element;
3554	13488		0.85	4.0E-22	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region, segment 12
6902	19787		2.7	4.0E-22	AL163202.2	NT	Homo sapiens chromosome 21 segment HS21C002
8703	17695	28244	2.97	4.0E-22	BF178500.1	EST HUMAN	92168281TFT NIH MGCC, 57 Homo sapiens cDNA clone IMAGE:408434 5'
9803	18815		1.51	4.0E-22	AL163203.2	NT	Homo sapiens chromosome 21 segment HS21C009
943	10868		1.2	3.0E-22	AV69079.1	EST HUMAN	tm4740.x1 NCI CGAP, C014 Homo sapiens cDNA clone IMAGE:216931 3' similar to gpL19593 HIGH AFFINITY INTERLEUKIN-8 RECEPTOR B (HUMAN) contains L1 t1 L1 repetitive element ;
2623	12387	27286	1.86	3.0E-22	AB59088.1	EST HUMAN	W6804.x1 NCI CGAP, B705 Homo sapiens cDNA clone IMAGE:242939 3' similar to SW-RL21_HUMAN P-48719 60S RIBOSOMAL PROTEIN L21 ;
3520	13534		1.46	3.0E-22	D14718.1	NT	Human chromosomal protein HMGT related gene
4695	14581	24374	2.72	3.0E-22	AB00725.1	EST HUMAN	q425c07.x1 Soares, pregnant, uterus, NH-PU Homo sapiens cDNA clone IMAGE:1697880 3' similar to
6763	16672	28854	2.76	3.0E-22	BE08841.1	EST HUMAN	RCB5-RT10707-16300-021-H10 B10707 Homo sapiens cDNA contains MER12.12 MER12 repetitive element ;
1910	11905		2.86	2.0E-22	BE09442.1	EST HUMAN	W75063a.1 Soares melanocytic 2NHM Homo sapiens cDNA clone IMAGE:267359 3'
2478	12552	22244	1.33	2.0E-22	P24616	SWISSPROT	IMMEDIATE EARLY GENE 13 PROTEIN PRECURSOR
3373	13322	23091	4.08	2.0E-22	9394043	NT	Homo sapiens protein kinase, AJP-activated, gamma 3 non-catalytic subunit (PRKA03), mRNA
4133	14033	23805	1.26	2.0E-22	AW617794.1	EST HUMAN	PM1-510262-261159-001-d12 ST0262 Homo sapiens cDNA

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## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Meat Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5670	19447	25551	1.44	2.0E-22/W39456.1	EST_HUMAN	EST_HUMAN	zs-20061.1 Sources, senescent, fibroblasts, NHRSF Homo sapiens cDNA clone IMAGE 322873 5' similar to
5747	17655	25763	3.39	2.0E-22/BF02116.1	EST_HUMAN	EST_HUMAN	95-X72008 MONOCYTE OHEMOTACTIC PROTEIN 3 PRECURSOR (HUMAN);
7595	17448	27691	1.49	2.0E-22/AZ76522.1	EST_HUMAN	EST_HUMAN	47606.x1 Sources, NIH/NIH, ST Homo sapiens cDNA clone IMAGE:1878299 3' similar to contains
7640	17490	27710	7.07	2.0E-22/AJ715315.1	EST_HUMAN	EST_HUMAN	MEF2B.13 MEF2B negative element;
7640	17490	27711	7.07	2.0E-22/AJ715315.1	EST_HUMAN	EST_HUMAN	md4HT1.s1 NCI CGAP_F122 Homo sapiens cDNA clone IMAGE:1219269 3'
8074	18779	28071	2.04	2.0E-22/AJ119960.1	EST_HUMAN	EST_HUMAN	hs240A.x1 NCI CGAP_K412 Homo sapiens cDNA clone IMAGE:2674655 3'
8099	18504	28200	1.85	2.0E-22/AL163280.2	NT	NT	Homo sapiens chromosome 21 segment HS21C080
1838	17213	21009	1.78	1.0E-22/AJ1865517.1	EST_HUMAN	EST_HUMAN	PM4-SN0020.010400-000-H02 SN0020 Homo sapiens cDNA
2538	11433	22303	2.66	1.0E-22/U64871.1	EST_HUMAN	EST_HUMAN	Human familial Alzheimer's disease (STM2) gene, complete cds
3395	13284	23094	1.74	1.0E-22/D14547.1	NT	NT	Human DNA, SINE repetitive element
6553	16411	26586	4.71	1.0E-22/BE084987.1	EST_HUMAN	EST_HUMAN	MR0-BT0656-22020-002-007 BT0659 Homo sapiens cDNA
9844	16242	26586	4.71	1.0E-22/AF168249.1	EST_HUMAN	EST_HUMAN	IL2-UM0076-07040-061-E11 UM0076 Homo sapiens cDNA
3622	13492	23236	0.94	8.0E-23/AF168249.1	NT	NT	Gallus gallus Dact2 protein (Dact2) mRNA, complete cds
8241	15168	24056	1.48	8.0E-23/AF133716.1	EST_HUMAN	EST_HUMAN	H42340 Human fetal liver cDNA library Homo sapiens cDNA
8241	15168	24056	1.48	8.0E-23/AF133716.1	EST_HUMAN	EST_HUMAN	H42340 Human fetal liver cDNA library Homo sapiens cDNA
3271	15162	24056	1.45	8.0E-23/AF133716.1	EST_HUMAN	EST_HUMAN	AV67246 QLG Homo sapiens cDNA clone QLGAV007 3'
4764	14648	24438	1.04	7.0E-23/1062828	NT	NT	Homo sapiens DRY2F3640463 protein (DRY2F3640463) mRNA
8399	18274	28226	3.51	7.0E-23/3031952	NT	NT	Homo sapiens Ndsb (C. melanogaster)-like protein (NDSBL) mRNA
3397	13305	23946	1.62	6.0E-23/AF166333.1	NT	NT	Rattus norvegicus RMTB (RMTB) mRNA, complete cds
4171	14071	23946	3.12	6.0E-23/AL163249.2	NT	NT	Homo sapiens chromosome 21 segment HS21C049
8140	18099	25339	1.89	6.0E-23/F224699.1	NT	NT	Homo sapiens mannosidase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2D 3
9146	18990	25339	1.89	6.0E-23/AF224699.1	NT	NT	(UBE2D)3 genes, complete cds
8341	15021	28297	2.18	6.0E-23/AF224699.1	EST_HUMAN	EST_HUMAN	Homo sapiens mannosidase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2D 3
5341	15202	25068	3.51	5.0E-23/U209180.1	EST_HUMAN	EST_HUMAN	qp55d03.x1 Sources, testis, NIH Homo sapiens cDNA clone IMAGE:1839480 3' similar to
5781	14564	25797	3.51	5.0E-23/AF178918.1	NT	NT	SW MV10, MOUSE P23246 PROTEIN MOV-10;
6397	14564	25797	3.04	5.0E-23/AF178918.1	NT	NT	Homo sapiens chromosome Xq28 melanoma antigen family A2a (MAGEA2A), melanoma antigen family A12 (MAGEA12), melanoma antigen family A2b (MAGEA2B), melanoma antigen family A3 (MAGEA3), colostrin (CALT), NAD(P)H dehydrogenase-like protein (NDSHL), and Lipo
							Pongo pygmaeus olfactory receptor (PPY116) gene, partial cds
							Pongo pygmaeus olfactory receptor (PPY116) gene, partial cds



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Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6580	10490	20953	3.86	3.0E-23	AA130165.1	EST_HUMAN	255506181 Soares_pregnanat_uterus_NHPU Homo sapiens cDNA clone IMAGE:503588 5' similar to contains MER29.12 MER29 repetitive element ;
7329	17233	27435	3.61	3.0E-23	Z70854.1	NT	Human endogenous retroviral element HC2
7329	17233	27435	3.61	3.0E-23	Z70854.1	NT	Human endogenous retroviral element HC2
680	15586	20402	4.36	2.0E-23	AJ285890.1	NT	Human sapiens KIAA0951 gene (partial), X13 gene and LZFL1 gene
1126	12644		2.77	2.0E-23	M65270.1	NT	Human matrix Gla protein (MGP) gene, complete cds
2755	12627	22519	1.06	2.0E-23	P22705	SWISSPROT	TENASIN-X PRECURSOR (TN-X) (HEXABRACHION-LIKE)
2755	12627	22520	1.06	2.0E-23	P22705	SWISSPROT	TENASIN-X PRECURSOR (TN-X) (HEXABRACHION-LIKE)
3325	13245		1.46	2.0E-23	AI201488.1	EST_HUMAN	987311.1 NCL CGAP P/28 Homo sapiens cDNA clone IMAGE:1043757 3' similar to TR-Q13837 Q13837
3655	13693	23598	3.03	2.0E-23	BE16590.1	EST_HUMAN	MER37 TRANSPOSABLE ELEMENT, COMPLETE CONSENSUS SEQUENCE.
3804	13804	23599	2.98	2.0E-23	H69031.1	EST_HUMAN	Y16022.1 Soares fetal liver spliced INEL5 Homo sapiens cDNA clone IMAGE:205418 5'
3804	13804	23599	2.98	2.0E-23	H69031.1	EST_HUMAN	Y16022.1 Soares fetal liver spliced INEL5 Homo sapiens cDNA clone IMAGE:205418 5'
6595	16475		5.02	2.0E-23	AF290107.1	NT	Homo sapiens cytochrome P-450 polypeptide 43 (CYP3A43) gene, partial cds; cytochrome P-450 polypeptide 43 (CYP3A43) gene, partial cds
8311	18898		2.80	2.0E-23	M32555.1	NT	Human alcohol dehydrogenase gamma subunit (ADH3) gene, exon 1
8356	19218		2.47	2.0E-23	AF006960.1	NT	Homo sapiens T cell receptor beta locus, TORB1V7522 region
9774	19678		2.02	2.0E-23	AI133931.1	EST_HUMAN	AUT133931 OVARG1 Homo sapiens cDNA clone OVARG1:009646 5'
4428	14823	24110	1.18	1.0E-23	AL163522.2	NT	Homo sapiens chromosome 21 segment HS21045
4657	14543		4.49	1.0E-23	AL163710.2	NT	Homo sapiens chromosome 21 segment HS21045
6334	19537		2.81	1.0E-23	BE378471.1	EST_HUMAN	601239465F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3006653 5'
9805	16744	20937	4.54	1.0E-23	AA440097.1	EST_HUMAN	2x62500.1 Soares, testis, NHT Homo sapiens cDNA clone IMAGE:762698 5' similar to contains P1R5.12 P1R5 repetitive element ;
640	10481		1.88	9.0E-24	AA68213.1	EST_HUMAN	4b750a8 s1 Stratagene fetal retinas 697202 Homo sapiens cDNA clone IMAGE:382758 3' similar to TR-E19622 E19622 CA PROTEIN ;
4549	14442	24225	1.08	8.0E-24	P23269	SWISSPROT	OLFACTORY RECEPTOR-LIKE PROTEIN IS
4549	14442	24226	1.08	8.0E-24	P23269	SWISSPROT	OLFACTORY RECEPTOR-LIKE PROTEIN IS
9796	13708		1.31	7.0E-24	AW687854.1	EST_HUMAN	QV0-DT0047-170200-122-408 DT0047 Homo sapiens cDNA
690	10523	20595	2.4	6.0E-24	A3001421.1	NT	Macaca fascicularis mRNA for Testis-Specific Protein Y (TSPY), complete cds
820	10748	20595	10.14	6.0E-24	AL163749.2	NT	Homo sapiens chromosome 21 segment HS21049
3889	13810	22585	7.19	5.0E-24	AI122043.1	NT	Homo sapiens 659 kb contig between AML1 and CBR1 on chromosome 21c22, segment 33
5511	15529	25609	3.06	4.0E-24	AA594478.1	EST_HUMAN	981105.s1 NCL CGAP, Gast1 Homo sapiens cDNA clone IMAGE:1085529 3' similar to SV-POL_MLVRK P31795 POLYPROTEIN ;

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9605	19121	26293	2.12	4.0E-24	AB020016.1	NT	Homo sapiens mRNA for KIAA1053 protein, partial cds
9748	19309	25203	1.93	4.0E-24	11418318	NT	Homo sapiens c2 and S phase expressed 1 (C2S1), mRNA
6006	19794	27463	3.02	3.0E-24	AW614871.1	EST_HUMAN	MEP29 negative element
7449	17258	27463	4.12	3.0E-24	AL162552.2	NT	Homo sapiens chromosome 21 segment HS21C032
9397	19171	26273	5.14	3.0E-24	BF127622.1	EST_HUMAN	301810406T NIH_MGC_49 Homo sapiens cDNA clone IMAGE:4033369 5'
2295	12180	22078	2.33	2.0E-24	AA167539.1	EST_HUMAN	2p1108t1 Stragena fetal cells 937202 Homo sapiens cDNA clone IMAGE:390161 5'
3729	13841	27071	1.01	2.0E-24	AW806180.1	EST_HUMAN	RC3-NIN008-00000-021-403 NK0883 Homo sapiens cDNA
7075	16952	27146	3.14	2.0E-24	AL119198.1	EST_HUMAN	DKF-ZP191177.2 171 701 (synonym: lam2) Homo sapiens cDNA clone DKF4p191.172 5'
9433	18717	26377	6.55	2.0E-24	M23877.1	EST_HUMAN	Human O family dispersed repeat element
1870	11972	21439	2.19	1.0E-24	7706340	NT	Homo sapiens CG1-127 protein (LOC101946), mRNA
2638	12605	2638	1.87	1.0E-24	AW820194.1	EST_HUMAN	DY0-310294-100000-418-C10 S10294 Homo sapiens cDNA
2687	12945	22710	0.91	1.0E-24	D98423.1	NT	Mus musculus mRNA for HGT keratin, partial cds
4173	14073	26377	1.63	1.0E-24	AF143313.1	NT	Homo sapiens PTEN (PTEN) gene, exon 2
8458	48317	26484	4.07	1.0E-24	AL103303.2	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C103
9333	19513	26703	1.98	1.0E-24	AW601144.1	EST_HUMAN	C10-NN1010-130000-281-467 NT1010 Homo sapiens cDNA
4928	14805	24575	2.32	7.0E-25	AA463944.1	EST_HUMAN	me2e10.s1 NCL_GCAP_Kid1 Homo sapiens cDNA clone IMAGE:911764 similar to contains MER1 b2
6785	16694	26845	3.75	7.0E-25	AA469846.1	EST_HUMAN	MER1 repetitive element
9042	18760	26046	7.46	7.0E-25	AA563540.1	EST_HUMAN	me2e10.s1 NCL_GCAP_P71 Homo sapiens cDNA clone IMAGE:80406 3' similar to contains THR.b2 THR
9174	15131	26500	4.32	6.0E-25	W167623.1	EST_HUMAN	repetitive element
6543	16401	26500	11.44	6.0E-25	W167623.1	EST_HUMAN	P36105 PROBABLE 60S RIBOSOMAL PROTEIN L4EA ;
9166	15032	24769	0.95	5.0E-25	AW68171.1	EST_HUMAN	ch5807.r1 Score: fetal liver spleen, INFLS, ST Homo sapiens cDNA clone IMAGE:416999 5'
8334	18499	26774	3.61	5.0E-25	AW1979107.1	EST_HUMAN	QY2L10051-260300-111-403 LT0681 Homo sapiens cDNA
1430	11335	21201	2.08	4.0E-25	T98107.1	EST_HUMAN	EST1591217 MAGE transcripts, MAGEP Homo sapiens cDNA
3336	15971	26774	2.78	4.0E-25	AW059771.1	EST_HUMAN	QY2694.r1 Score: fetal liver spleen INFLS Homo sapiens cDNA
4221	14119	26774	3.02	4.0E-25	EE170697.1	EST_HUMAN	P48-010593-260200-091-407 OT0063 Homo sapiens cDNA
3278	13199	22899	2.96	3.0E-25	6823321	NT	QY3-110548-140400-14e-w11 LT0543 Homo sapiens cDNA
3278	13199	23000	2.05	3.0E-25	6823321	NT	Homo sapiens hypoxanthine phosphoribosyl transferase (HGPRT) cDNA
4798	14833	24470	0.85	3.0E-25	P29622	SWISSPROT	Homo sapiens hypoxanthine phosphoribosyl transferase (HGPRT) cDNA
6854	16733	23626	2.47	3.0E-25	AL163210.2	NT	KALLISTATIN PRECURSOR (KALLISTATIN INHIBITOR) (PROTEASE INHIBITOR 4)

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Table 4

### Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8594	16270	28622	2.03	3.0E-26	AA479013.1	EST_HUMAN	m30h10.s1 NC_UGAP_P1 Homo sapiens cDNA clone IMAGE 916931 similar to contains L1:L1 L1 repetitive element;
1325	11232	21049	3.37	2.0E-26	8032168	NT	Homo sapiens fraxinuluch (beta)-like 1 (TBL1) cDNA
2280	12144	22083	4.32	2.0E-25	BE888016.1	EST_HUMAN	801611530F1 NIH_MGC_T7 Homo sapiens cDNA clone IMAGE 3913087 5'
2801	12370	22263	4.32	2.0E-25	P17008	SWISSPROT	403 RIBOSOMAL PROTEIN S16
4096	13966	23773	1.91	2.0E-25	P17008	SWISSPROT	403 RIBOSOMAL PROTEIN S16
4099	13969	23774	1.91	2.0E-25	P17008	SWISSPROT	403 RIBOSOMAL PROTEIN S16
7629	17460	27700	2.25	2.0E-26	AL445573.1	EST_HUMAN	AK466743 Homo sapiens Testis (Standard G9) Homo sapiens cDNA
361	10317	20188	1.61	1.0E-26	AL040229.1	EST_HUMAN	DKFZ424H0313.1 t134 (synonym: Hs26) Homo sapiens cDNA clone DKFZ40410313 5'
1228	11195	21181	1.21	1.0E-26	9535487	NT	Human endogenous retrovirus, complete genome
2384	12264	22169	2.76	1.0E-25	Q03055	SWISSPROT	AT1 SYNTHASE-RELATED PROTEIN 22 PRECURSOR (ATPASE PROTEIN 9) (SUBUNIT C)
4750	14683	24168	2.71	1.0E-26	BA682737.1	EST_HUMAN	PM1471048-0400100-002-003 H10164 Homo sapiens cDNA
8096	19460	28169	2.85	1.0E-26	AA682960.1	EST_HUMAN	m34h11.1 NC_UGAP_K368 Homo sapiens cDNA clone IMAGE:1087740 3'
6616	19486	26653	3.15	1.0E-26	AA760079.1	EST_HUMAN	2650504.41 Soares, fetal liver, NHHH189W Homo sapiens cDNA clone IMAGE:394922 3' similar to contains PTB3.3 PTRS repetitive element;
8837	18214	28467	3.5	1.0E-25	U69163.1	NT	Homo sapiens IMAGE-B2 (IMAGE-B2), IMAGE-B3 (IMAGE-B3), IMAGE-B4 (IMAGE-B4), and IMAGE-B1 (IMAGE-B1) genes, complete cds
9143	18897	28760	1.46	1.0E-26	D14647.1	NT	Human DNA, SINE repetitive element
9143	18897	28767	1.45	1.0E-26	D14647.1	NT	Human DNA, SINE repetitive element
8914	18366	21836	1.32	1.0E-25	X51755.1	NT	Human, lambda3a-immunoglobulin constant region complex (gemline)
2433	12310	22206	1.94	9.0E-26	AL163218.2	NT	Human sapiens chromosome 21 segment HS21G018
9010	19501	1	1.73	9.0E-26	AL163285.2	NT	Homo sapiens chromosome 21 segment HS21C085
8422	15411		1.56	9.0E-26	D14647.1	NT	Human DNA, SINE repetitive element
1559	11664	21921	1.44	7.0E-26	AF003528.1	NT	Homo sapiens X-chromal aniridia-related dysplasia protein gene (EDA), exon 2 and flanking repeat regions
3868	13068	23394	1.35	7.0E-26	BX8211.1	NT	H-sapiens DNA for endogenous retroviral like element
4027	13659	23745	2.03	7.0E-26	AAW40193.1	EST_HUMAN	h027212.k1 Soares_NFL_T1 GBC_S1 Homo sapiens cDNA clone IMAGE:2968366 3'
8923	18731		7.99	7.0E-26	AA115695.1	EST_HUMAN	zn30408.r1 Strallergene neuroepithelium NT2PM1 997234 Homo sapiens cDNA clone IMAGE:548943 5' similar to gpM14338 VITAMIN K-DEPENDENT PROTEIN S PRECURSOR (HUMAN);
9020	19250		1.33	7.0E-26	AAW95459.1	EST_HUMAN	EST:3006928 IMAGE-residues, MAGC Homo sapiens cDNA
2178	12065	21967	2.44	6.0E-26	AF02908.1	NT	Homo sapiens chromosome 9 duplication of the T cell receptor beta locus and tyrosinogen gene families
3302	13223	23025	1.42	6.0E-26	AA207613.1	EST_HUMAN	zn3504.r1 Strallergene neuroepithelium (660723) Homo sapiens cDNA clone IMAGE:548943 5'
8952		25033	4.86	6.0E-26	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C0310

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Table 4

### Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Even SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1160	11073	20618	3.33	5.0E-26	AI08235.1	EST_HUMAN	as38106.x1 Baristaad extra HPLR86 Homo sapiens cDNA clone IMAGE:2319519 3' similar to WP-F49C12.11 CE030371
1160	11073	20619	3.33	5.0E-26	AI08235.1	EST_HUMAN	as38106.x1 Baristaad extra HPLR86 Homo sapiens cDNA clone IMAGE:2319519 3' similar to WP-F49C12.11 CE030371
6976	19455		1.71	5.0E-26	AI0761429.1	EST_HUMAN	w95060.x1 Soares NFS F3 SW_OT_PA_P_51 Homo sapiens cDNA clone IMAGE:2369998 3' similar to
1526	11430		1.32	4.0E-26	AJ325548.1	EST_HUMAN	EST133446 Embryo, 12 week HL Homo sapiens cDNA 5' and
7416	17263		3.71	4.0E-26	7657670	NT	Homo sapiens upstream binding transcription factor RNA polymerase I (UBTF) mRNA
8003	17944	28164	3.74	4.0E-26	EE269187.1	EST_HUMAN	60191346F1 NIH MG-7 Homo sapiens cDNA clone IMAGE:3550210 5'
1559	11833	21740	1.5	3.0E-26	AI045955.2	EST_HUMAN	DKF24346F1 nt1 434 (synonym: hnc3) Homo sapiens cDNA clone DR-Z6434098 5'
1887	11880		2.41	3.0E-26	AA111805.1	EST_HUMAN	z106063.1 Stradiene neoplasium NT2RA81 897234 Homo sapiens cDNA clone IMAGE:44894 5'
3712	13625	23408	1.16	3.0E-26	AA115264.1	EST_HUMAN	z330107.1 Stradiene clone (#637204) Homo sapiens cDNA clone IMAGE:384327 5' similar to TR-G965374
3712	13625	23409	1.16	3.0E-26	AA115264.1	EST_HUMAN	z330107.1 Stradiene clone (#637204) Homo sapiens cDNA clone IMAGE:384327 5' similar to TR-G965374
6131	15973	28114	4.35	3.0E-26	BP224548.1	EST_HUMAN	G969374 THYROID RECEPTOR INTERACTOR :
8108	17098		2.18	3.0E-26	AF039405.1	NT	60188498F1 NIH MG-57 Homo sapiens cDNA clone IMAGE:408327 5'
8883	18951		1.96	3.0E-26	AW176951.1	EST_HUMAN	Homo sapiens ML (MLL) gene, exons 1-3, and partial cds
8933	18995	28652	1.99	3.0E-26	AW176951.1	EST_HUMAN	O12-PT0012-0400-040-124-c05 PT0012 Homo sapiens cDNA
8879	18991	28654	10.35	3.0E-26	AA453173.1	EST_HUMAN	m57405.1 NCI CGAP_G035 Homo sapiens cDNA clone IMAGE:1069057 3' similar to contains ORF.1
6961	10000	20416	5.91	2.0E-26	AI163262.2	NT	Homo sapiens chromosome 21 segment H327C083
1825	11723	22041	3.35	2.0E-26	AI039099.2	EST_HUMAN	DKF24568.171_31 596 (synonym: hnc22) Homo sapiens cDNA clone DKF24568.171_3
3163	13118	22624	4.26	2.0E-26	X69994.1	NT	BM musculis mRNA for actin/cyt phosphoprotein, PEK-15
8195	18023		2.88	2.0E-26	D07975.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
8549	18420	28680	4.55	2.0E-26	A1801412.1	EST_HUMAN	ic68401.1 NCI CGAP_G044 Homo sapiens cDNA clone IMAGE:2185419 3' similar to contains ALU
8720	18337		1.82	2.0E-26	A105006.1	NT	repetitive element/containing element MER20 MER20 repetitive element :
9252	19562		2.19	2.0E-26	A033789.1	NT	Homo sapiens MHC class I region
132	11060	19627	1.39	1.0E-26	BE110376.1	EST_HUMAN	Homo sapiens mRNA for KIAA1438 protein, partial cds
2001	11854	21796	2.38	1.0E-26	AI037093.2	EST_HUMAN	GV44-IT0538-020300-123-c02 T10538 Homo sapiens cDNA
2916	12090	22282	0.84	1.0E-26	BE314685.1	EST_HUMAN	DKF24344H10.1 nt1 434 (synonym: hnc3) Homo sapiens cDNA
2654	12321		16.79	1.0E-26	AF271065.1	EST_HUMAN	MRF2-BN0114-0500-030-067 BN0114 Homo sapiens cDNA
							Homo sapiens glyoxaldehyde-3-phosphate oxidase (GADPH) mRNA, complete cds

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6089	16034		2.75	1.0E-28	BE15980.1	EST_HUMAN	MR3-HT0487.1/5020-113-g01 HT0487 Homo sapiens cDNA
8260	16146		3.17	1.0E-28	AL038487.1	EST_HUMAN	DNFZ06662146.1 555 (synonym: htk2) Homo sapiens cDNA clone DKFZ566C2148.5
9493	19737		1.84	1.0E-28	H55003.1	EST_HUMAN	C19F220032 Chromosome 22 exon Homo sapiens cDNA clone C22.48.5
7354	17342		3.11	9.0E-27	U93163.1	NT	Homo sapiens IMAGE-B2 (IMAGE-B2), IMAGE-B3 (IMAGE-B3), IMAGE-B4 (IMAGE-B4), and IMAGE-B1 (IMAGE-B1) genes, complete cds
8027	19470	28118	3.48	9.0E-27	P41266	SWISSPROT	MYOESIN 2 (MLPROTEIN) (165 KD TITIN-ASSOCIATED PROTEIN) (165 KD CONNECTIN-ASSOCIATED PROTEIN)
8013	19312		3.07	9.0E-27	BF45555.1	EST_HUMAN	W46041.1 NC1 CGAP Lx19 Homo sapiens cDNA clone IMAGE325344.3 similar to contains OFR H1
10	9596	19787	3.09	8.0E-27	A1831492.1	EST_HUMAN	OFR repetitive element: 1
645	10486		4.13	8.0E-27	AL18227.2	NT	THR repetitive element: 1
1895	11300	21155	18.87	8.0E-27	AW182737.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C027
1325	11300	21159	18.87	8.0E-27	AW162737.1	EST_HUMAN	U87008.1 Schneider fetal brain 03003 Homo sapiens cDNA clone IMAGE2763295.3 similar to gb:U00558
2121	12008	21908	0.98	8.0E-27	AW824776.1	EST_HUMAN	TUBULIN ALPHA-1 CHAIN (HUMAN); TUBULIN ALPHA-1 CHAIN (HUMAN); TUBULIN ALPHA-1 CHAIN (HUMAN);
3148	13073	22874	3.31	8.0E-27	AF12228	SWISSPROT	P42-SU0108-22800-302-407 SU0108 Homo sapiens cDNA
3309	13200	23035	0.91	8.0E-27	AF161597.1	NT	ADP-ATP CARRIER PROTEIN, LIVER (SOPORM T2 (ADP/ATP TRANSLOCASE 3) (ADENINE NUCLEOTIDE TRANSLATOR 3) (ANT 3)
6165	15122		3.12	8.0E-27	BE52650.1	EST_HUMAN	Homo sapiens WRN (WRN) gene, complete cds
6198	15966	20088	4	8.0E-27	N84070.1	EST_HUMAN	MT4-810369-22600-504-400 BT0368 Homo sapiens cDNA
7310	17186	27390	1.08	8.0E-27	AW537079.1	EST_HUMAN	J17671 Human fetal heart, Lambda ZAP Express Homo sapiens cDNA clone J1751.5 similar to
7310	17186	27397	1.08	8.0E-27	AW567079.1	EST_HUMAN	REPETITIVE ELEMENT L1
698	10802		1.22	7.0E-27	Z70864.1	NT	CM1-CT0315-091299-093-407 CT0315 Homo sapiens cDNA
5023	14866		2.09	7.0E-27	AW529172.1	EST_HUMAN	CM1-CT0315-091299-093-407 CT0315 Homo sapiens cDNA
18132	18020		4.22	7.0E-27	AJ271795.1	NT	Human endogenous retroviral element H22
9531	19204		2.07	7.0E-27	AJ271795.1	EST_HUMAN	h51121.21 Scores: NFI, T, GBC, S1 Homo sapiens cDNA clone IMAGE2576879.3 similar to TRC078040
8109	17999	28246	6.21	6.0E-27	M26907.1	NT	ORF640 ORF2: FUNCTION UNKNOWN; 1 Homo sapiens Xig pseudobulbosomal region, segment 1/2
7877	17727	27970	2.92	5.0E-27	BF60614.1	EST_HUMAN	HY723355 HTB Homo sapiens cDNA clone HTBAHE02.5
7877	17727	27971	2.92	5.0E-27	BF60614.1	EST_HUMAN	Human nuclear protein (B23) mRNA, complete cds
6046	15949	20090	1.54	4.0E-27	9910560	NT	902121.61911 NIH_MGC 165 Homo sapiens cDNA clone IMAGE-4278327.5 902121.61911 NIH_MGC 165 Homo sapiens cDNA clone IMAGE-4278327.5 Mus musculus sperm tail associated protein (Slep), mRNA

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Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	REF SEQ ID NO:	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6659	16039		1.23	4.0E-27	AF078779.1	NT	Rattus norvegicus putative four repeat ion channel mRNA, complete cds
8890	16092	26895	2.56	4.0E-27	X82921.1	NT	H sapiens DNA for endogenous retroviral like element
1995	11889	21782	5.42	3.0E-27	X60958.1	NT	R. rattus RY43 mRNA for a potential ligand-binding protein
4174	14074	23849	1.27	3.0E-27	BE071624.1	EST_HUMAN	PAC-BT0527-080100-001-d11 BT0527 Homo sapiens cDNA
5278	16200	24676	5.13	3.0E-27	AA077065.1	EST_HUMAN	7B44C08 Chromosome 7 Fetal Brain cDNA Library Homo sapiens cDNA clone 7B44C08
7385	17343	27549	2.98	3.0E-27	BF035327.1	EST_HUMAN	607-468331 F1 NH1 JGC 36 Homo sapiens cDNA clone IMAGE:362069 5'
36	10023	19920	7.96	2.0E-27	AF054187.1	NT	Homo sapiens cDNA NAG mRNA, complete cds
1853	11749		18.58	2.0E-27	AA65846.1	EST_HUMAN	n01010.31 NC1 CGAP_P11 Homo sapiens cDNA clone IMAGE:1000699 similar to gbM17895 60S
3071	12398		10.27	2.0E-27	AW629172.1	EST_HUMAN	ADICIC RIBOSOMAL PROTEIN P1 (HUMAN); NM1121211 Soares, NCL, LGC8.S1 Homo sapiens cDNA clone IMAGE:2976579 3' similar to TR-078040 O78040 ORF2 FUNCTION UNKNOWN. ;
3197	13112	22816	1.43	2.0E-27	AF11167.2	NT	Homo sapiens Jun dimerization protein gene, partial cds, cfos gene, complete cds, and unknown gene
3197	13112	22917	1.43	2.0E-27	AF11167.2	NT	Homo sapiens Jun dimerization protein gene, partial cds, cfos gene, complete cds, and unknown gene
3044	13862	23827	1.39	2.0E-27	AF006358.1	NT	Rattus norvegicus voltage-gated sodium channel mRNA, complete cds
6712	18692	23780	1.5	2.0E-27	AF069347.1	EST_HUMAN	W82907.X1 NC1 CGAP_U11 Homo sapiens cDNA clone IMAGE:242268 3'
7338	17268		2.3	2.0E-27	AA561827.1	EST_HUMAN	nf08058.51 NC1 CGAP_Thyl1 Homo sapiens cDNA clone IMAGE:943737 similar to contains 1.18 L1 repetitive element ;
7798	17618	27947	1.22	2.0E-27	M78590.1	EST_HUMAN	EST100738 Fetal brain, Striatum (cat/939206) Homo sapiens cDNA clone HFBG-07
7768	17618	27948	1.22	2.0E-27	M78590.1	EST_HUMAN	EST100738 Fetal brain, Striatum (cat/939206) Homo sapiens cDNA clone HFBG-07
8324	16201	28460	2.89	2.0E-27	AU121085.1	EST_HUMAN	AU121085 MAMM1 Homo sapiens cDNA clone MAMM1000748 5'
9778	11748		20.62	2.0E-27	AA658346.1	EST_HUMAN	n01010.31 NC1 CGAP_P111 Homo sapiens cDNA clone IMAGE:1000699 similar to gbM17895 60S
429	10374		1.56	1.0E-27	AL163246.2	NT	ADICIC RIBOSOMAL PROTEIN P1 (HUMAN); Homo sapiens chromosome 21 segment HS21C048 Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
980	10903	20749	1.41	1.0E-27	AB026898.1	NT	Homo sapiens Retina-derived POU-domain factor-1 (RPF-1), mRNA
9643	15948	25972	6.31	1.0E-27	6005955	NT	HSPD20461 HMG Homo sapiens cDNA clone 4400005G10
6105	15069	26136	2.2	1.0E-27	F30158.1	EST_HUMAN	HSPD20461 HMG Homo sapiens cDNA clone 4400005G10
6105	15069	26137	2.2	1.0E-27	F30158.1	EST_HUMAN	HSPD20461 HMG Homo sapiens cDNA clone 4400005G10
7005	19582	27075	1.72	1.0E-27	AB007923.1	NT	Homo sapiens mRNA for KIAA0454 protein, partial cds
7194	10711		1.89	1.0E-27	BE070780.1	EST_HUMAN	EC6-BT0627 : 40200-01-1-506 BT0627 Homo sapiens cDNA
7605	17467	27672	2.69	1.0E-27	D87449.1	NT	Human mRNA for KIAA0239 gene, partial cds
8043	18791	29046	3.14	1.0E-27	AF111093.1	NT	Bos taurus integrin 3 splice variant Bsh mRNA, complete cds

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Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (TCO) HH BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1361	10109		2.32	9.0E-28	BE348906.1	EST_HUMAN	hw1761.x1 NCL CGAP_L124 Homo sapiens cDNA clone IMAGE:3183188.3 similar to TR-Q07314 Q07314
3028	10270	20080	3.01	9.0E-29	AU126380.1	EST_HUMAN	SECRETED NEUREXIN IIIA-PH-C PRECURSOR [3] TR-Q07260 TR-Q07313
5118	14686	24760	1.21	9.0E-29	AJ590115.1	EST_HUMAN	h12309.x1 NCL CGAP_U12 Homo sapiens cDNA clone N72RP1003443.3 similar to
5118	14686	24761	1.21	9.0E-29	AJ590115.1	EST_HUMAN	h12309.x1 NCL CGAP_U12 Homo sapiens cDNA clone IMAGE:2778909.3 similar to contains ORF.11 OFR
9093	18860		3.74	9.0E-28	BF377656.1	EST_HUMAN	h12309.x1 NCL CGAP_U12 Homo sapiens cDNA clone IMAGE:2778909.3 similar to contains ORF.11 OFR
9418	19522		1.97	8.0E-29	AJ147571.1	EST_HUMAN	h12309.x1 NCL CGAP_U12 Homo sapiens cDNA clone IMAGE:2778909.3 similar to contains ORF.11 OFR
1184	11077	20023	7.84	7.0E-29	AU142760.1	EST_HUMAN	h12309.x1 NCL CGAP_U12 Homo sapiens cDNA clone IMAGE:2778909.3 similar to contains ORF.11 OFR
8523	18395	28660	2.54	7.0E-29	AU142760.1	EST_HUMAN	h12309.x1 NCL CGAP_U12 Homo sapiens cDNA clone IMAGE:2778909.3 similar to contains ORF.11 OFR
6033	18386		1.44	7.0E-29	AJ735346.1	EST_HUMAN	h12309.x1 NCL CGAP_U12 Homo sapiens cDNA clone IMAGE:2778909.3 similar to contains ORF.11 OFR
3937	13364	28670	1.27	8.0E-29	AB020673.1	NT	h12309.x1 NCL CGAP_U12 Homo sapiens cDNA clone IMAGE:2778909.3 similar to contains ORF.11 OFR
3937	13364	28671	1.27	8.0E-29	AB020673.1	NT	h12309.x1 NCL CGAP_U12 Homo sapiens cDNA clone IMAGE:2778909.3 similar to contains ORF.11 OFR
6673	18232		2.73	8.0E-29	A450482.1	EST_HUMAN	h12309.x1 NCL CGAP_U12 Homo sapiens cDNA clone IMAGE:2778909.3 similar to contains ORF.11 OFR
315	10277		3.08	5.0E-28	A8271003.1	EST_HUMAN	h12309.x1 NCL CGAP_U12 Homo sapiens cDNA clone IMAGE:2778909.3 similar to contains ORF.11 OFR
3627	13836	28616	1.85	5.0E-28	R70762.1	EST_HUMAN	h12309.x1 NCL CGAP_U12 Homo sapiens cDNA clone IMAGE:2778909.3 similar to contains ORF.11 OFR
2864	12465	22347	1.42	4.0E-28	AJ119606.1	EST_HUMAN	h12309.x1 NCL CGAP_U12 Homo sapiens cDNA clone IMAGE:2778909.3 similar to contains ORF.11 OFR
3070	12697	22788	3.39	4.0E-28	BE-09100.1	EST_HUMAN	h12309.x1 NCL CGAP_U12 Homo sapiens cDNA clone IMAGE:2778909.3 similar to contains ORF.11 OFR
5336	16199	26369	1.89	4.0E-28	A1168941.1	EST_HUMAN	h12309.x1 NCL CGAP_U12 Homo sapiens cDNA clone IMAGE:2778909.3 similar to contains ORF.11 OFR
8239	18116		4.29	4.0E-28	AF026308.1	NT	h12309.x1 NCL CGAP_U12 Homo sapiens cDNA clone IMAGE:2778909.3 similar to contains ORF.11 OFR
8371	18248		63.6	4.0E-28	AF026308.1	NT	h12309.x1 NCL CGAP_U12 Homo sapiens cDNA clone IMAGE:2778909.3 similar to contains ORF.11 OFR
8338	16100	26346	2.94	4.0E-28	A1168941.1	EST_HUMAN	h12309.x1 NCL CGAP_U12 Homo sapiens cDNA clone IMAGE:2778909.3 similar to contains ORF.11 OFR
1262	11169		1.89	3.0E-28	A1168941.1	EST_HUMAN	h12309.x1 NCL CGAP_U12 Homo sapiens cDNA clone IMAGE:2778909.3 similar to contains ORF.11 OFR
7124	17001	27193	2.19	3.0E-28	BF364030.1	EST_HUMAN	h12309.x1 NCL CGAP_U12 Homo sapiens cDNA clone IMAGE:2778909.3 similar to contains ORF.11 OFR
6306	18193	28430	1.84	3.0E-28	U83598.1	NT	h12309.x1 NCL CGAP_U12 Homo sapiens cDNA clone IMAGE:2778909.3 similar to contains ORF.11 OFR

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Max Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9459	19105		2.44	3.0E-29	AI831991.1	EST_HUMAN	W68907.x1 NCL CGAP_Lym12 Homo sapiens cDNA clone IMAGE:2410885 3' similar to contains Alu repetitive element contains element HGR repetitive element;
83	10067	16684	6.45	2.0E-29	BE062167.1	EST_HUMAN	RC1-BT0254-223030-019-c05 BT0254 Homo sapiens cDNA
1149	11062	20605	10	2.0E-29	Y11107.3	NT	Homo sapiens ITGB3 gene for integrin beta 3 subunit, exon 3, 41
2427	12504	22200	2.1	2.0E-29	AI346534.1	EST_HUMAN	W68905.x1 NCL CGAP_Lys5 Homo sapiens cDNA clone IMAGE:1910483 3' similar to contains L1.12.L1 repetitive element;
5521	12527		4.26	2.0E-28	BF21205.1	EST_HUMAN	611814109F1 NHJ JGC_34 Homo sapiens cDNA clone IMAGE:1048751 5'
7528	17379		5.86	2.0E-29	AW072805.1	EST_HUMAN	EST183304 IMAGE sequences, MAGL Homo sapiens cDNA
8887	18308	28982	2.27	2.0E-28	AF24989.1	NT	Homo sapiens mannosidase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E20 3 (UBE2D3) genes, complete cds
1483	11368	21283	2.42	1.0E-28	D39344.1	NT	Human gene for Ahr-receptor, exon 7-9
2173	12060	21983	1.95	1.0E-29	BF33236.1	EST_HUMAN	Q17-15102F1-12600-350-653 B10621 Homo sapiens cDNA
2650	12517	22407	1.03	1.0E-29	AF00695.1	NT	Homo sapiens ubiquitin TPR modf, Y isoform (UTY) mRNA, alternative transcript 2, complete cds
6937	18467		4.46	1.0E-28	11429883	NT	Homo sapiens similar to ribosomal protein L12 (H. sapiens) (L0053091), mRNA
6875	19555		3.02	1.0E-28	892793	NT	Homo sapiens hypothetical protein FLJ10989 (FLJ10989), mRNA
7046	17214	27413	2.93	1.0E-28	AA308744.1	EST_HUMAN	EST179619 HCC cell line (metastasis to liver in mouse) II Homo sapiens cDNA 5' and similar to similar to neuronal LTR
7678	17528	27753	5.15	1.0E-28	4758431	NT	Homo sapiens gamma-glutamyltransferase-like activity 1 (GGTLA1), mRNA
7678	17528	27754	5.15	1.0E-28	4758431	NT	Homo sapiens gamma-glutamyltransferase-like activity 1 (GGTLA1), mRNA
8038	18840		3.95	1.0E-28	AA054182.1	EST_HUMAN	JF51001.1 Scores refseq N2b-HRT Homo sapiens cDNA clone IMAGE:380449 5'
9797	19485		1.43	1.0E-28	AL163247.2	NT	Homo sapiens chromosome 21 segment HS21047
9892	19891	24898	2.8	9.0E-29	AW1663987.1	EST_HUMAN	HT6905.x1 Scores, N1L2_T_GBC, ST Homo sapiens cDNA clone IMAGE:2291268 3'
9555	19189		2.82	8.0E-29	Q00130	SWISSPROT	HYPOTHETICAL GENE 50 PROTEIN
1594	11468	21349	0.91	7.0E-29	AW06447.1	EST_HUMAN	EST1378927 IMAGE sequences, MAGI Homo sapiens cDNA
9942	19410		5.08	7.0E-29	A132392.1	NT	Rattus norvegicus mRNA for 45 Da secretory protein, partial
590	10518	26325	6.52	6.0E-29	AB36748.1	EST_HUMAN	W68901.x1 NCL CGAP_Bm25 Homo sapiens cDNA clone IMAGE:2469585 3' similar to TR-O15475
9353	18028		3.88	6.0E-29	BS340493.1	EST_HUMAN	O15475 UNANIMATED HERV(H) PROTEIN, contains LTR 5' LTR/ repetitive element;
9438	18076		1.89	6.0E-29	BF569097.1	EST_HUMAN	RC3-UT0002-210600-021-c05 UT0002 Homo sapiens cDNA
4928	14807		0.89	5.0E-29	AL163203.2	NT	60218492F1 NHJ JGC_42 Homo sapiens cDNA clone IMAGE:4300079 5'
7008	19945		7.01	5.0E-29	AW681544.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS210303
3104	13119		1.88	4.0E-29	AF152937.1	EST_HUMAN	RC3-UT0001-170300-011-c12 OT0091 Homo sapiens cDNA
5955	15558		6.95	4.0E-29	BE104830.1	EST_HUMAN	cn1502.x1 Normal Human Trabecular Bone Cells Homo sapiens cDNA clone NHTRC, cn1502 random
						EST_HUMAN	CY14HT017-126030-121-405 HT0471 Homo sapiens cDNA



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Table 4

Single Exon Probe Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7070	16066	27146	4.71	4.0E-29	U04686.1	NT	Human B0 MD heat shock protein gene, complete cds
4317	14214	23897	1.46	3.0E-29	AB042287.1	NT	Homo sapiens PTIS gene for 6-pyruvate hydroxylase synthase, complete cds
4626	14514	24055	1.31	3.0E-29	BF33236.1	EST_HUMAN	QY1-BT0821:126500-350-503 BT0821 Homo sapiens cDNA
7070	16067	27138	2.07	3.0E-29	U03644.1	NT	Human gene for Ah-receptor, exon 7-9
7362	17229	27429	1.6	3.0E-29	AW30317.1	EST_HUMAN	X17063.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2813405 3' similar to contains AU repetitive element contains MER19.12 MER19 repetitive element.
7462	17382		1.64	3.0E-29	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21O048
8591	18459	28728	2.22	3.0E-29	AA40363.1	EST_HUMAN	462401.T1 Soares_walsh_MIT Homo sapiens cDNA clone IMAGE:728889 5' similar to TRG135769
9248	18659		1.81	3.0E-29	U03932.1	NT	G1355760 GAG-POL POLYPROTEIN.1
484	10427	20240	1.43	2.0E-29	AF04699.1	NT	Human H4J115 mRNA for H4J115, complete cds
484	10427	20241	1.43	2.0E-29	AF04699.1	NT	Homo sapiens envelope protein RIC-2 (enr) gene, complete cds
1618	11421	21276	6.12	2.0E-29	AB63594.1	EST_HUMAN	Homo sapiens envelope protein RIC-2 (enr) gene, complete cds
1516	11421	21276	6.12	2.0E-29	AB63604.1	EST_HUMAN	W66410.x1 NCL CGAP_U1T Homo sapiens cDNA clone IMAGE:2492563 3' similar to TR-O15548 O15548
4182	14382	23855	2.03	2.0E-29	AL163268.2	NT	HERV-E ENVELOPE GLYCOPROTEIN.1
5750	15658	28785	1.43	2.0E-29	AB06418.1	EST_HUMAN	Human sapiens chromosome 21 segment HS21O088
8401	15658	28785	1.43	2.0E-29	AB06418.1	EST_HUMAN	W27297.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2359980 3' similar to contains element MERD repetitive element.
7474	17334	27639	2.95	2.0E-29	AL163248.2	NT	element MERD repetitive element.
7474	17334	27640	2.05	2.0E-29	AL163248.2	NT	Homo sapiens chromosome 21 segment HS21O048
7876	17720	27673	3.39	2.0E-29	AL163248.2	NT	Homo sapiens chromosome 21 segment HS21O048
7876	17720	27674	3.39	2.0E-29	AL163248.2	NT	Homo sapiens chromosome 21 segment HS21O048
8004	18618		1.96	2.0E-29	AW68070.1	EST_HUMAN	QY0-OT0032-083000-195-401 OT0032 Homo sapiens cDNA
9004	18807		1.73	2.0E-29	AL163227.2	NT	Homo sapiens chromosome 21 segment HS21O027
7105	16982	27174	6.41	1.0E-29	AW68390.1	EST_HUMAN	RC1-HN0003-220300-021-1041 HN0003 Homo sapiens cDNA
5936	16971		3.04	9.0E-30	AA761215.1	EST_HUMAN	1220407.s1 NCL CGAP_GC081 Homo sapiens cDNA clone IMAGE:1288332 3' similar to contains MER1.L1
9132	16889		1.5	9.0E-30	11422746.1	NT	element MERD repetitive element.
5815	15721		8.81	8.0E-30	F06888.1	EST_HUMAN	Homo sapiens <i>zinc-finger regulated transcription factor 1</i> (ZFR1), mRNA
6812	16691	26830	3.37	8.0E-30	AA393873.1	EST_HUMAN	HS02481051 normalized infant brain cDNA Homo sapiens cDNA clone c23605
7039	16916	27105	3.53	8.0E-30	AA55072.1	EST_HUMAN	ES1197317 Thomas_Homo sapiens cDNA 5' end similar to EST containing O family repeat
							PT2_1_13_B11.1 Bamz2 Homo sapiens cDNA 3'

Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) HT BLAST E Value	Top HT Accession No.	Top HT Database Source	Top HT Descriptor
1499	11403		1.16	7.0E-30	BC09133.1	EST HUMAN	PM4-BT0724-180400-004-BT10724 Homo sapiens cDNA
1546	11454		0.95	6.0E-30	X57165.1	NT	Human lambda-immunoglobulin constant region complex (germline)
1738	11837	21905	1.26	6.0E-30	Z5303.1	NT	Human mRNA for integrin alpha subunit, complete cds
3163	13078	22879	2.41	6.0E-30	BE006028.1	EST HUMAN	QV6-BN0147-290400-21472 BN0147 Homo sapiens cDNA
5916	11454		3.16	6.0E-30	X57165.1	NT	Human lambda-immunoglobulin constant region complex (germline)
3931	13840	23820	31.29	5.0E-30	A339892.1	EST HUMAN	tp2a05.x1 NCI CGAP CLL1 Homo sapiens cDNA clone IMAGE:2118278 3' similar to contains Alu repetitive element
5205	19522		7.35	5.0E-30	A339892.1	EST HUMAN	Human acetate hydratase (ACO2) gene, exon 7
8201	18141		3.65	6.0E-30	U87951.3	NT	Homo sapiens chromosome 21 segment HS21C078
8495	18369	26332	0.69	5.0E-30	AL103278.2	NT	Homo sapiens chromosome 21 segment HS21C070
8495	18369	26333	0.69	5.0E-30	AL103210.2	NT	Homo sapiens chromosome 21 segment HS21C010
2060	11865	21980	1.84	4.0E-30	AW183747.1	EST HUMAN	QV2-DT0043-09200-095-c06 DT0043 Homo sapiens cDNA
2060	11865	21981	1.84	4.0E-30	AW183747.1	EST HUMAN	QV2-DT0043-09200-095-c06 DT0043 Homo sapiens cDNA
7122	11039	27231	1.46	4.0E-30	AW182483.1	EST HUMAN	GM1-ST0161-091189-035-c08 S10181 Homo sapiens cDNA
1134	11048		1.71	3.0E-30	A339351.1	EST HUMAN	q96063.X1 Borealis fish, <i>Neofugu</i> , <i>Neofugu</i> contains MER2b-like MER2b repetitive element
3997	13611	23595	0.91	3.0E-30	AF128953.1	NT	Homo sapiens telomerase reverse transcriptase (TERT) gene, exons 1-6
8539	18410	26575	2.38	3.0E-30	P34056	SWISSPROT	TRANSCRIPTION FACTOR AP-2
659	10953	20411	1.18	2.0E-30	AW1857316.1	EST HUMAN	GM2-C10307-310100-158-R03 C10307 Homo sapiens cDNA
1088	10984		2.32	2.0E-30	P06958.1	EST HUMAN	HS123F081 normalized infant brain cDNA Homo sapiens cDNA clone c-2805
1464	11369	21234	5.91	2.0E-30	BE175877.1	EST HUMAN	RC6-HT0682-110400-013-H08 HT0582 Homo sapiens cDNA
2093	12548	22438	10.97	2.0E-30	BE175822.1	EST HUMAN	IL2-NT0101-280700-116-E04 NT0101 Homo sapiens cDNA
2899	12816	22009	6.38	2.0E-30	AF141654.1	NT	Homo sapiens Y-linked zinc finger protein (ZFP) gene, complete cds
3721	13833	23419	1.72	2.0E-30	AW206581.1	EST HUMAN	UHF-B1-afco-12-U1et1 NCI CGAP Sub3 Homo sapiens cDNA clone IMAGE:272588 3'
4693	14554	24346	1.72	2.0E-30	BE268946.1	EST HUMAN	601119690F1 NIH MGCC-17 Homo sapiens cDNA clone IMAGE:3029438 5'
4696	14554	24347	1.72	2.0E-30	BE268946.1	EST HUMAN	601119690F1 NIH MGCC-17 Homo sapiens cDNA clone IMAGE:3029438 5'
6590	15944	27036	3.46	2.0E-30	C118939.1	EST HUMAN	C118939 Human placenta cDNA (Tf-glycane) Homo sapiens cDNA clone GEN-570C01 5'
7019	15969	27085	1.55	2.0E-30	BE570617.1	EST HUMAN	7e37c12.x1 NCI CGAP Lu24 Homo sapiens cDNA clone IMAGE:3284952 3' similar to SW-DHSA, HUMAN P31040 SUCCINATE DEHYDROGENASE (UBIQUINONE) FLAVOPROTEIN SUBUNIT PRECURSOR
7019	15969	27085	1.55	2.0E-30	BE570617.1	EST HUMAN	7e37c12.x1 NCI CGAP Lu24 Homo sapiens cDNA clone IMAGE:3284952 3' similar to SW-DHSA, HUMAN P31040 SUCCINATE DEHYDROGENASE (UBIQUINONE) FLAVOPROTEIN SUBUNIT PRECURSOR
7743	17563	27814	3.3	2.0E-30	AW1971568.1	EST HUMAN	EST188657 MAGEE sequences, MAGL Homo sapiens cDNA



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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2750	12821		1.38	4.0E-31	5730038	NT	Homo sapiens SET domain and mariner transposases fusion gene (SETMAR) mRNA
5904	19360		1.52	4.0E-31	11430273	NT	Homo sapiens KIA00589 gene product (KIA00589), mRNA
5718	18289		1.38	4.0E-31	AB00881.1	NT	Homo sapiens gene for activin receptor type IIB, complete cds
2550	12423	22314	1.42	3.0E-31	6008971	NT	Homo sapiens SEC38, endoplasmic reticulum translocon component (S. cerevisiae) like (SEC38L), mRNA
8341	16204	26366	9.03	3.0E-31	4628833	NT	Homo sapiens NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 8 (16kD, ASH-1) (NDUF8B) mRNA
6435	16285	28248	1.35	3.0E-31	11430230	NT	Homo sapiens hypothetical protein FLJ10842 (FLJ10842), mRNA
6743	16024		1.85	3.0E-31	AL163200.2	NT	Homo sapiens chromosome 21 segment HS27C009
7525	17379	27885	2.85	3.0E-31	U14523.1	NT	Horse mRNA for ferritin L-chain, complete cds
8028	17020	28167	2.01	3.0E-31	P141174	SWISSPROT	40S RIBOSOMAL PROTEIN S15 (R1C PROTEIN)
8463	18599		6.35	3.0E-31	BF035327.1	EST_HUMAN	601488831.F1 NH, MGCC 88 Homo sapiens cDNA clone IMAGE386208 5'
1875	11771	21647	1.83	2.0E-31	AW338171.1	EST_HUMAN	QV2.L70051.260300-111.03.L70051 Homo sapiens cDNA
2187	12054	21055	1.31	2.0E-31	AB383388.1	EST_HUMAN	1944955.x1 Soares_NFL_1_T81 (synonym: hem2) Homo sapiens cDNA clone IMAGE2111972 3'
2262	12174	22074	2.18	2.0E-31	AL118245.1	EST_HUMAN	DKF26761G1513_1 T81 (synonym: hem2) Homo sapiens cDNA clone DKF26761G1513 5'
2391	12296	22164	4.4	2.0E-31	AA459324.1	EST_HUMAN	saep1.L51 Stratiotes fedoides 897202 Homo sapiens cDNA clone IMAGE388413 3' similar to contains
5502	15421	25483	3.6	2.0E-31	BE350127.1	EST_HUMAN	1TR.L2 THR repetitive element
7248	17123		1.8	2.0E-31	AA87764.1	EST_HUMAN	1009971.x1 NC1 CGAP_K618 Homo sapiens cDNA clone IMAGE3146258 3' similar to contains MER29.33
7338	17165	27885	3.85	2.0E-31	7651535	NT	MER29 repetitive element
7700	17560	27776	1.27	2.0E-31	AA710948.1	EST_HUMAN	10098041 NC1 CGAP_Cx10 Homo sapiens cDNA clone IMAGE146055 3' similar to TR.Q1357 Q1357
7767	17647	27883	2.17	2.0E-31	BE06911.1	EST_HUMAN	MER37 TRANSPOSABLE ELEMENT, COMPLETE CONSENSUS SEQUENCE, 1
7797	17647	27884	2.17	2.0E-31	BE06911.1	EST_HUMAN	Homo sapiens 50 protein (50), mRNA
9252	18503		2	2.0E-31	AF148512.1	NT	AV710948 Cl Homo sapiens cDNA clone CUALE507 5'
9431	18759		1.81	2.0E-31	AF148512.1	NT	301304128.F1 NH, MGCC 21 Homo sapiens cDNA clone IMAGE3858310 5'
161	10002	19704	8.34	1.0E-31	U03165.1	NT	301304128.F1 NH, MGCC 21 Homo sapiens cDNA clone IMAGE3858310 5'
1640	11544	21403	2	1.0E-31	068371	SWISSPROT	Homo sapiens histidine H1 gene, promoter region
1640	11544	21404	2	1.0E-31	068371	SWISSPROT	HA1110 Human fetal liver cDNA library Homo sapiens cDNA
1640	11544	21405	2	1.0E-31	068371	SWISSPROT	Homo sapiens IMAGE-B2 (IMAGE-B2), IMAGE-B3 (IMAGE-B3), IMAGE-B4 (IMAGE-B4), and IMAGE-B1
4535	14428	24300	1.01	1.0E-31	AL194376.1	EST_HUMAN	(IMAGE-B1) genes, complete cds
							OLFACTORY RECEPTOR 2C1
							OLFACTORY RECEPTOR 2C1
							OLFACTORY RECEPTOR 2C1
							DKF26761G1513_1 T81 (synonym: hem2) Homo sapiens cDNA clone DKF26761G1513 5'

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4535	14428	24210	1.01	1.0E-32	AL34781.1	EST_HUMAN	DMP24P47B25.1 647 (synonym: hbr1) Homo sapiens cDNA clone DKFZp57B235.6
5235	15159	24927	3.15	1.0E-31	AF391078.1	EST_HUMAN	MRS-5710202-151299-028-008_1 ST02030 Homo sapiens cDNA
5236	15635	25738	1.87	1.0E-31	AF048727.1	NT	Homo sapiens minisatellite cdb1 repeat region
8288	18167	28411	2.72	1.0E-31	AI066434.1	EST_HUMAN	q21003.x1 NCI CGAP_Brn25 Homo sapiens cDNA clone IMAGE:179070.3 similar to TR-Q16895
2835	12783	18531	0.99	9.0E-32	U50871.1	NT	Q16995 FRAXIN ;
6000	15605	20029	2.34	6.0E-32	AF723976.1	EST_HUMAN	Human familial Alzheimer's disease (STM2) gene, complete cds
2032	11523	21815	3.32	6.0E-32	AI059770.1	EST_HUMAN	ac715409.7 HTB Homo sapiens cDNA clone HTBAAG01.5
4764	14639	24428	1.17	7.0E-32	P52591	SWISSPROT	NUCLEAR ENVELOPE PORE MEMBRANE PROTEIN POM 121 (PORE MEMBRANE PROTEIN OF 121 KD) (P145)
8288	18872		2.77	7.0E-32	X17283.1	NT	Human chromosome 22 immunoglobulin (V)Q) gene, part, with 5' breakpoint between cytosine and neighbouring non-augmented region
2702	12588	22486	0.9	6.0E-32	AF478104.1	EST_HUMAN	h34410.x1 NCI CGAP_K6111 Homo sapiens cDNA clone IMAGE:2156994.3 similar to contains MER28 B
6369	16222		1.5	6.0E-32	BE68905.1	EST_HUMAN	MER28 repetitive element ;
1018	10368	20779	29.97	6.0E-32	AF116927.1	NT	6011511350F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3913067.5
915	10383		1.74	4.0E-32	AL163462.2	NT	Homo sapiens P50.1181 mRNA, complete cds
6461	10342	20510	2.82	4.0E-32	U1432574.1	NT	Homo sapiens chromosome 21 segment H527C048
6461	10342	20511	2.82	4.0E-32	U1432574.1	NT	Homo sapiens A1 binding transcription factor 1 (A1BF1), mRNA
448	10362	20713	3.4	3.0E-32	U17293.1	NT	Homo sapiens PL-1 gene, partial
1438	11543	21210	7.67	3.0E-32	AF731500.1	EST_HUMAN	AV731500 HTB Homo sapiens cDNA clone HTAKC037.6
7404	17271	27477	6.73	3.0E-32	AF76834.1	EST_HUMAN	AV76834 BM Homo sapiens cDNA clone BMFBH12.5
7404	17271	27476	6.73	3.0E-32	AF76834.1	EST_HUMAN	AV76834 BM Homo sapiens cDNA clone BMFBH12.5
8297	18776	28421	8.06	3.0E-32	AA77921.1	EST_HUMAN	295407.s1 Soares_fetal_liver_spleen_infls_S1 Homo sapiens cDNA clone IMAGE:445600.3 similar to contains THR-13 THR repetitive element ;
9294	18965		3.04	3.0E-32	BE276986.1	EST_HUMAN	601156289F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3139701.5
9655	15090	24982	2.43	3.0E-32	5174674	NT	Homo sapiens myeloid/lymphoid or mixed-lineage leukemic (thymocyte) (Drosophila) homolog, translocated to, 4 (MLT1) mRNA
9655	15090	24983	2.43	3.0E-32	5174674	NT	Homo sapiens myeloid/lymphoid or mixed-lineage leukemic (thymocyte) (Drosophila) homolog, translocated to, 4 (MLT1) mRNA
9802	18314		4.94	3.0E-32	BE276986.1	EST_HUMAN	601156289F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3139701.5
4783	14977	24164	0.91	2.0E-32	BE269613.1	EST_HUMAN	601173931F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3329159.5
5600	15008	25628	19.01	2.0E-32	238133.1	NT	H. sapiens mRNA for myosin
5600	15008	25630	19.01	2.0E-32	238133.1	NT	H. sapiens mRNA for myosin

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Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF-SEQ ID NO.	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
0815	16094	26984	3.41	2.0E-32	AA114294.1	EST_HUMAN	zr66c08.r1 Strategene HeLa cell s3 697216 Homo sapiens cDNA clone IMAGE:563160 5'
0815	16094	26984	3.41	2.0E-32	AA114294.1	EST_HUMAN	zr66c08.r1 Strategene HeLa cell s3 697216 Homo sapiens cDNA clone IMAGE:563160 5'
6909	16095	26755	1.61	2.0E-32	AV1736446.1	EST_HUMAN	AV1736446.CB Homo sapiens cDNA clone CBFA08 5'
6908	16095	26756	1.05	2.0E-32	AV1736446.1	EST_HUMAN	AV1736446.CB Homo sapiens cDNA clone CBFA08 5'
3055	12682		1.05	2.0E-32	BE143596.1	EST_HUMAN	601573.2071F1 NIH MGSC 9 Homo sapiens cDNA clone CBFA08 5'
6198	16098	26990	7.04	1.0E-32	11439789	NT	Homo sapiens chromosome 11 open reading frame 9 (C11orf9), mRNA
6907	16074	27066	5.18	1.0E-32	AV120574.1	EST_HUMAN	rw21g02.r1 NCL CGAP_L1242 Homo sapiens cDNA clone IMAGE:1241138 3' similar to contains T1HR13 THR repetitive element
3435	13352		4.68	9.0E-33	BE327142.1	EST_HUMAN	W1W DOMAINS BINDING PROTEIN 11.1
6907	16773		4.19	9.0E-33	AF23390.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
7103	16080	27172	1.06	9.0E-33	BF347235.1	EST_HUMAN	602021164F1 NCL CGAP_Bme7 Homo sapiens cDNA clone IMAGE:4156670 5'
8171	16055		5.86	9.0E-33	AL163260.2	NT	Homo sapiens chromosome 21 segment HS21C080
841	10041	19580	2.06	7.0E-33	6031738	NT	Homo sapiens short-chain alcohol dehydrogenase family member (HEP27) mRNA
541	10041	19581	2.06	7.0E-33	6031738	NT	Homo sapiens short-chain alcohol dehydrogenase family member (HEP27) mRNA
2115	12004	21602	2.71	7.0E-33	AB50115.1	EST_HUMAN	1623603.r1 NCL CGAP_L102 Homo sapiens cDNA clone IMAGE:2779800 3' similar to contains OPR11 OFR repetitive element
2612	12480		8.4	7.0E-33	AV1730056.1	EST_HUMAN	AV1730056.HTF Homo sapiens cDNA clone HTPANF08 5'
2800	11573	21438	1.78	7.0E-33	AV1730056.1	EST_HUMAN	AV1730056.HTF Homo sapiens cDNA clone HTPANF08 5'
3204	13124		12.85	7.0E-33	AV1671807.1	EST_HUMAN	EST1383930.MAGE resequences, MAGE Homo sapiens cDNA
8203	18087	28538	3.9	7.0E-33	BF347235.1	EST_HUMAN	602021164F1 NCL CGAP_Bme7 Homo sapiens cDNA clone IMAGE:4156670 5'
8573	18441	28709	2.15	7.0E-33	AV1971508.1	EST_HUMAN	EST1383930.MAGE resequences, MAGE Homo sapiens cDNA
9274	18078	26522	3.43	7.0E-33	AA601416.1	EST_HUMAN	nc018013.1 NCL CGAP_Ph01 Homo sapiens cDNA clone IMAGE:1100681 3' similar to contains L1, L1, L1 repetitive element
3070	13560		0.85	6.0E-33	AL163260.2	NT	Homo sapiens chromosome 21 segment HS21C085
6888	16955	27059	13.52	6.0E-33	JD4038.1	NT	Human glyceraldehyde 3-phosphate dehydrogenase (GAPDH) gene, complete cds
7049	16026	27117	2.57	6.0E-33	11429198	NT	Human sapiens similar to RAD23 (S. cerevisiae) homolog 9 (H. sapiens) (LOC593277) mRNA
7150	17000	27622	1.24	6.0E-33	6756509	NT	Mus musculus SRY-box containing gene 6 (Sax6) mRNA
7750	17000	27623	1.24	6.0E-33	6756509	NT	Mus musculus SRY-box containing gene 6 (Sax6) mRNA
1736	11640		1.78	5.0E-33	BF37315.1	EST_HUMAN	OV1-FT10109-100700-271-uc2 F10169 Homo sapiens cDNA
1838	11795		1.18	5.0E-33	11141884	NT	Homo sapiens adult carrier family 5 (nuclein transporter), member 7 (SLC5A7) mRNA
1866	11752	21626	1.37	5.0E-33	4507208	NT	Homo sapiens spermidine synthase (SRM) mRNA
1866	11752	21627	1.37	5.0E-33	4507208	NT	Homo sapiens spermidine synthase (SRM) mRNA

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Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (10p) Hit E-VALUE	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2226	12111		1.3	6.0E-33	AL163286.2	NT	Homo sapiens chromosome 21 segment HS21C085
9082	18958		1.52	6.0E-33	11433063	NT	Homo sapiens ubiquitin protein ligase E3A (human papilloma virus E6-associated protein, Angelman syndrome) (UBE3A), mRNA
1112	11027		3.28	4.0E-33	AL163207.2	NT	Homo sapiens chromosome 21 segment HS21C007
2078	11608	21861	1.77	4.0E-33	4759897	NT	Homo sapiens RAB1, member RAS oncogene family (RAB1) mRNA
2370	12250		7.39	4.0E-33	AA026921.1	EST_HUMAN	451615.1,1 Stratiogene lung carcinom 637218 Homo sapiens cDNA clone IMAGE:844317 5' similar to contains Alu repetitive element/contains MER28.b2 MER28 repetitive element ;
2498	12373	22265	3.77	4.0E-33	AL16310.2	NT	U1H-B12-ahc-03-04.1 NCI CGAP SubA Homo sapiens cDNA clone IMAGE:2727149 3'
4382	14278	24057	1.63	4.0E-33	AW26346.1	EST_HUMAN	phX12971, part 1 HETEROGENEOUS NUCLEAR RIBONUCLEOPROTEIN A1 (HUMAN);
5318	16239	25043	20.94	4.0E-33	AA050953.1	EST_HUMAN	Homo sapiens killer cell immunoglobulin-like receptor, three domains, long cytoplasmic tail, 1 (KIR3DL1), mRNA
9007	16810	25102	1.72	4.0E-33	11425635	NT	h90g01.x1 NCI CGAP K6r13 Homo sapiens cDNA clone IMAGE:3146295 3' similar to contains MER29.b3
1073	10889		4.49	3.0E-33	BE350127.1	EST_HUMAN	MER29 repetitive element ;
1074	10999		3.4	3.0E-33	BE350127.1	EST_HUMAN	h90g01.x1 NCI CGAP K6r13 Homo sapiens cDNA clone IMAGE:3146295 3' similar to
2400	12721		1.48	3.0E-33	AV647851.1	EST_HUMAN	2V474571 QLC Homo sapiens cDNA clones GLC8CF09 3'
69	10003		2.33	2.0E-33	AI160189.1	EST_HUMAN	q6r7g03.x1 Scores, fetal, heart, N6H115W Homo sapiens cDNA clone IMAGE:1705204 3' similar to contains ORF.11 ORF repetitive element ;
4322	14219		4.27	2.0E-33	BE190339.1	EST_HUMAN	NR0-1710405-100003-202-008 HT0405 Homo sapiens cDNA
4911	14790	24695	6.1	2.0E-33	AA026963.1	EST_HUMAN	aa519111.1 Stratiogene lung carcinom 637218 Homo sapiens cDNA clone IMAGE:844308 5' similar to
5026	14899	24698	1.73	2.0E-33	11421332	NT	phX00734, cdnt 1 UBULIN BETA-5 CHAIN (HUMAN);
5026	14899	24698	1.73	2.0E-33	11421332	NT	Homo sapiens hypothetical protein SRP-52 (SRP-52), mRNA
5809	16775	25894	1.61	2.0E-33	AI277402.1	EST_HUMAN	q6r601.x1 Scores, NIH-HUPA_351 Homo sapiens cDNA clone IMAGE:1890161 3'
7281	17138		1.8	2.0E-33	AI052565.1	EST_HUMAN	oz216003.x1 Scores, fetal, liver, spleen, 1NFUS. S1 Homo sapiens cDNA clone IMAGE:1675973 3' similar to
8	9994		1.44	1.0E-33	AF009528.1	NT	phX209598 TRANSLATIONAL INITIATION FACTOR 2 BETA SUBUNIT (HUMAN);
8937	18502	28778	2.02	1.0E-33	AV169518.1	EST_HUMAN	Homo sapiens X-linked embryonic endometrial dysplasia protein gene (EDA), exon 2 and flanking repeat regions
8921	18729	29024	5.33	1.0E-33	U00822.1	NT	Q19-BN047-250200-102-003 BN0047 Homo sapiens cDNA
9453	19161		1.62	1.0E-33	AI927167.1	EST_HUMAN	Homo dystrophin (DMD) gene, exons 7, 8 and 9, and partial cds
							wa8306.x1 NCI CGAP K5d1 Homo sapiens cDNA clone IMAGE:2402410 3'

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Meat Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9723	9994		3.04	1.0E-33 AF003328.1	NT	EST_HUMAN	Homo sapiens X-linked anhidrotic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
9764	15276	25229	1.34	1.0E-33 AF003328.1	EST_HUMAN	EST_HUMAN	A1727509 HTC Homo sapiens cDNA clone HTCCNC12 5'
9927	15399		2.09	9.0E-34 AJ271735.1	NT	EST_HUMAN	Homo sapiens Xq pseudautosomal region, segment 1/2
1427	11332	21108	1.96	7.0E-34 J70845.1	EST_HUMAN	EST_HUMAN	yH15650.1 Soares fetal liver spleen NF1S Homo sapiens cDNA clone IMAGE:108320 5'
8240	15020		3.09	7.0E-34 J12865.1	EST_HUMAN	EST_HUMAN	yH4410.1 Soares placenta N52HP Homo sapiens cDNA clone IMAGE:148722 5'
463	10409	20225	1.46	6.0E-34 J10691.1	NT	EST_HUMAN	Human G2 protein mRNA, partial cds
463	10409	20220	1.46	6.0E-34 J10691.1	NT	EST_HUMAN	Human G2 protein mRNA, partial cds
9153	15003	25340	1.44	6.0E-34 J03666.1	NT	EST_HUMAN	Mus musculus DAB/2J hair-specific (hsc-1) gene
1837	11734		2.23	5.0E-34 J70950.0	NT	EST_HUMAN	Homo sapiens Nw68-binding protein Nw687 (LOC51729), mRNA
4603	14839	24831	4	5.0E-34 J30883.1	NT	EST_HUMAN	Human splicing factor SFRS5-1 (SFR-15) mRNA, complete cds
7144	17021	27216	1.18	5.0E-34 AF07579.1	NT	EST_HUMAN	Rattus norvegicus putative four repeat ion channel mRNA, complete cds
8048	17937	28186	2.12	6.0E-34 AB03796.1	NT	EST_HUMAN	Homo sapiens mRNA for KIAA1438 protein, partial cds
8578	16448		2.01	6.0E-34 AL163290.2	EST_HUMAN	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C099
1953	15148	21176	2.11	4.0E-34 AB04567.1	EST_HUMAN	EST_HUMAN	H04408.1 NCI CGAP PC28 Homo sapiens cDNA clone IMAGE:2249194 3'
2087	12562	22141	0.98	4.0E-34 J622607	NT	EST_HUMAN	Homo sapiens hypothetical protein FLJ10980 (FJ10980), mRNA
8482	15355		4.81	3.0E-34 J5703527.1	EST_HUMAN	EST_HUMAN	6014585.F1 NH_IGCG.69 Homo sapiens cDNA clone IMAGE:386208 5'
1489	11393	21254	8.95	1.0E-34 P12236	SWISSPROT	SWISSPROT	ADP-ATP CARRIER PROTEIN, LIVER (SOPORM T2 (ADP/ATP TRANSLOCASE 3) (ADENINE NUCLEOTIDE TRANSLATOR 3) (ANT 3))
9621	13305	23220	1.48	1.0E-34 AF003328.1	NT	EST_HUMAN	Homo sapiens X-linked anhidrotic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
3979	13869	23691	0.78	1.0E-34 AY00397.1	NT	EST_HUMAN	Homo sapiens WNT3 precursor (WNT3) mRNA, complete cds
3979	13868	23682	0.78	1.0E-34 AY00397.1	NT	EST_HUMAN	Homo sapiens WNT3 precursor (WNT3) mRNA, complete cds
4381	14277		4.02	1.0E-34 BE07141.1	EST_HUMAN	EST_HUMAN	RC2-BT0506-240400-016-H06 BT0506 Homo sapiens cDNA
4920	14799		0.86	1.0E-34 AW84706.1	EST_HUMAN	EST_HUMAN	MRO-CT0068-280990-002-411 CT0068 Homo sapiens cDNA
5731	15639	25743	1.59	1.0E-34 BE87405.1	EST_HUMAN	EST_HUMAN	60148430.F1 NH_IGCG.89 Homo sapiens cDNA clone IMAGE:386699 5'
5731	15639	25744	1.59	1.0E-34 BE87405.1	EST_HUMAN	EST_HUMAN	60148430.F1 NH_IGCG.89 Homo sapiens cDNA clone IMAGE:386699 5'
7155	17032	27226	3.87	1.0E-34 AW36845.1	EST_HUMAN	EST_HUMAN	60148430.F1 NH_IGCG.89 Homo sapiens cDNA clone IMAGE:386699 5'
7591	17442	27658	6.80	1.0E-34 AL036936.1	EST_HUMAN	EST_HUMAN	DKFZp564A1553.1 554 (synonym: H52) Homo sapiens cDNA clone DKFZp564A1553 5'
8746	19307		2.92	1.0E-34 AL19310.2	NT	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C010
3594	13008	23280	1.26	9.0E-35 AW95302.1	EST_HUMAN	EST_HUMAN	HNT1000.Y1 NCI CGAP GU1 Homo sapiens cDNA clone IMAGE:25087 5'
219	15189		24.25	6.031100	NT	EST_HUMAN	Homo sapiens prohibitin (PH) mRNA
1427	11934	21475	3.3	8.0E-34 BF98997.1	EST_HUMAN	EST_HUMAN	nead3a08.v1 NCI CGAP K6r1 Homo sapiens cDNA clone IMAGE:3258134 3' similar to TRC756912
1737	14731						075912 DIACYLGlycerol KINASE IOTA ;





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Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon ID NO:	ORF SEQ ID NO:	Expression Signal	Meat Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7465	17225		1.81	3.0E-35	AF22351.1	NT	Homo sapiens calcium channel alpha1c subunit (CACNA1C) gene, exons 7-48, and partial cds, alternatively spliced
103	12650	18602	1.74	2.0E-35	U88965.1	EST_HUMAN	K09323 Human fetal heart. Lambda ZAP Express Homo sapiens cDNA clone K0932 5' similar to
2171	11083	20228	1.25	2.0E-35	T11906.1	EST_HUMAN	REPETITIVE ELEMENT
2171	12058	21061	5.2	2.0E-35	AB018413.1	NT	AG71F Heart Homo sapiens cDNA clone AG71
3272	13163	22891	0.97	2.0E-35	6912439	NT	Homo sapiens Gnt2-associated binder 2 (KIA03671), mRNA
3272	13163	22892	0.97	2.0E-35	6912439	NT	Homo sapiens Gnt2-associated binder 2 (KIA03671), mRNA
3511	13427		0.88	2.0E-35	AB020702.1	NT	Homo sapiens mRNA for KIA0365 protein, partial cds
3835	13747	23539	1.09	2.0E-35	BE247575.1	EST_HUMAN	TCBAP2E4328 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HGSC project:TCBA Homo sapiens cDNA clone TCBAP4328
3835	13747	23540	1.09	2.0E-35	BE247575.1	EST_HUMAN	TCBAP2E4328 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HGSC project:TCBA Homo sapiens cDNA clone TCBAP4328
4570	14482		2.55	2.0E-35	BA62283.1	EST_HUMAN	XV19412.1 Soares fetal liver cDNA library Homo sapiens cDNA clone IMAGE:274076 5'
4526	15347	26401	1.66	2.0E-35	BF532417.1	EST_HUMAN	QY610701.1 210405-198-b04 BT0701 Homo sapiens cDNA
8175	18063	28312	3.72	2.0E-35	K55417.1	NT	1 sapiens PROS-27 mRNA
8025	13183	22891	1.36	2.0E-35	6912439	NT	Homo sapiens Gnt2-associated binder 2 (KIA03671), mRNA
9025	13183	22891	1.36	2.0E-35	6912439	NT	Homo sapiens Gnt2-associated binder 2 (KIA03671), mRNA
9205	18035	23554	1.51	2.0E-35	BE040783.1	EST_HUMAN	00186774F1 NIH MGCC 70 Homo sapiens cDNA, clone IMAGE:386699 5'
9205	18035	23555	1.51	2.0E-35	BE040783.1	EST_HUMAN	00186774F1 NIH MGCC 70 Homo sapiens cDNA, clone IMAGE:386699 5'
9725	19204		3.97	2.0E-35	AL103210.2	NT	Homo sapiens chorion heart. Lambda ZAP Express Homo sapiens cDNA clone K0582 5' similar to
9832	19205	15002	4.17	2.0E-35	N88065.1	EST_HUMAN	K0582 Human fetal heart. Lambda ZAP Express Homo sapiens cDNA clone K0582 5' similar to
40	10028	19520	4.36	1.0E-35	AA031949.1	EST_HUMAN	REPETITIVE ELEMENT
40	10028	19520	4.36	1.0E-35	AA031949.1	EST_HUMAN	REPETITIVE ELEMENT
758	10697	20500	4.43	1.0E-35	AW388473.1	EST_HUMAN	h1616B Regional genomic DNA specific cDNA library Homo sapiens cDNA clone CR2-1
758	10697	20501	4.43	1.0E-35	AW388473.1	EST_HUMAN	h1616B Regional genomic DNA specific cDNA library Homo sapiens cDNA clone CR2-1
758	10697	20501	4.43	1.0E-35	AW388473.1	EST_HUMAN	h1616B Regional genomic DNA specific cDNA library Homo sapiens cDNA clone CR2-1
891	10817		2.31	1.0E-35	BT8794.1	EST_HUMAN	IL2-ST0162-131089-006-412 ST0162 Homo sapiens cDNA
891	10817		2.31	1.0E-35	BT8794.1	EST_HUMAN	IL2-ST0162-131089-006-412 ST0162 Homo sapiens cDNA
2495	12369	22822	1.16	1.0E-35	7709094	NT	W89301.1 Soares fetal liver spleen cDNA library Homo sapiens cDNA clone IMAGE:115732 5' similar to
2495	12369	22822	1.16	1.0E-35	7709094	NT	W89301.1 Soares fetal liver spleen cDNA library Homo sapiens cDNA clone IMAGE:115732 5' similar to
2740	12602	22496	1.11	1.0E-35	BE350127.1	EST_HUMAN	SP-A44282 A44282 RETROVIRUS-RELATED POLYPROTEIN - HUMAN ;
2740	12602	22496	1.11	1.0E-35	BE350127.1	EST_HUMAN	h08901.x1 NCI CGAP_K6193 Homo sapiens cDNA clone IMAGE:3146256 3' similar to contains MER29.53
2740	12602	22497	1.11	1.0E-35	BE350127.1	EST_HUMAN	h08901.x1 NCI CGAP_K6193 Homo sapiens cDNA clone IMAGE:3146256 3' similar to contains MER29.53
2740	12602	22497	1.11	1.0E-35	BE350127.1	EST_HUMAN	h08901.x1 NCI CGAP_K6193 Homo sapiens cDNA clone IMAGE:3146256 3' similar to contains MER29.53



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Table 4

### Single Exon Probes Expressed in Heart

Probe Seq ID NO.	Exon Seq ID NO.	ORF SEQ ID/NO	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession	Top Hit Database Source	Top Hit Descriptor
6318	19010	28337	2.36	5.0E-36	11417882	NT	Human sapiens calcineurin binding protein 1 (KIA0330), mRNA
1205	11115	20691	1.43	4.0E-36	BEO10038.1	EST HUMAN	PMB-BN170-100400-001-g04-BN0176 Homo sapiens cDNA
1424	11329	21166	1.54	4.0E-36	P10266	SWISSPROT	RETROVIRUS-RELATED POL POLYPROTEIN [CONTAINS: REVERSE TRANSCRIPTASE ; ENDONULEASE]
1626	11262	21359	1.89	4.0E-36	BE935274.1	EST HUMAN	007298574F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:3628396 5'
2175	12052	21399	1.63	4.0E-36	AW247772.1	EST HUMAN	2320200_Sprme NIH_MGC_7 Homo sapiens cDNA clone IMAGE:28202020 5'
3310	13231	20036	3.21	4.0E-36	BE366289.1	EST HUMAN	012822620F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3004108 5'
3310	13231	20036	3.21	4.0E-36	BE366289.1	EST HUMAN	001282620F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3004108 5'
5693	15920	26704	2.21	4.0E-36	11487044.1	EST HUMAN	Human alpha 1,4-galactosyl and methylglucosyl transferase domain 22 (ADAM22), transcript variant 3, mRNA
6511	16370	26617	1.74	4.0E-36	U533320.1	NT	Human placenta Glycoprotein Ii1 (GP1Ib) gene, exons 2-39
6879	16366	27050	1.41	4.0E-36	D307675.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
6879	16366	27051	1.41	4.0E-36	U87675.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
8359	18233	28481	2.19	4.0E-36	AA400370.1	EST HUMAN	3006810.T1 Soares, testis_NHT Homo sapiens cDNA clone IMAGE:742520 5'
8334	19015	28481	1.31	4.0E-36	114208716	EST HUMAN	HV305928 NP Homo sapiens cDNA clone TPCAB011 5'
8330	19348	28512	2.85	4.0E-36	AV753629.3	EST HUMAN	AV753629 NP Homo sapiens cDNA clone TPCAB011 5'
681	10814	20437	2.73	3.0E-36	AF069810.1	NT	Homo sapiens human III-alpha gene, partial cds
2262	12136	22033	0.80	3.0E-36	7682201	NT	Homo sapiens KIA0082 protein (KIA0082), mRNA
4402	14287	24081	5.15	3.0E-36	1018136	NT	Mus musculus juncophilin 1 (Jp1-pending), mRNA
8452	18328	28584	1.78	3.0E-36	BF0353327.1	EST HUMAN	01495531.F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3862096 5'
3132	13057	22857	2.7	2.0E-36	BE25067.1	EST HUMAN	01106343F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3342708 5'
4877	14757	24634	4.62	2.0E-36	AW1660376.1	EST HUMAN	0V4C10030-240300-174-104 OT0030 Homo sapiens cDNA
6371	15281	25127	2.16	2.0E-36	AF287174.1	NT	Mus musculus P41-phox gene, complete cds
5567	15483	26556	3.99	2.0E-36	P07768.1	EST HUMAN	EST100948 Infant Brain, Banto Soares Homo sapiens cDNA clone HBB126 5' and
8622	15907	26956	11.82	2.0E-36	7662628.1	EST HUMAN	bc44407.1 Stragelens liver (6937224) Homo sapiens cDNA clone IMAGE:83360 5'
807	10793	20543	0.96	1.0E-36	BE405310.1	EST HUMAN	001306308F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3855480 5'
2068	11987	21894	1.98	1.0E-36	BE146523.1	EST HUMAN	RC2-H110217-131168-027-H07 RT0247 Homo sapiens cDNA
2068	11987	21895	0.86	1.0E-36	BE146523.1	EST HUMAN	RC2-H110217-131168-027-H07 RT0247 Homo sapiens cDNA
2155	12843	21942	1.31	1.0E-36	BF57671.1	EST HUMAN	002739409F1 NIH_MGC_38 Homo sapiens cDNA clone IMAGE:4272808 5'
5762	15960	26711	5.84	1.0E-36	AB67114.1	EST HUMAN	wb37612.x1 NT_OGAP_G03 Homo sapiens cDNA clone IMAGE:2907862 3' similar to contains Alu repetitive element
8640	18520	26711	2.03	1.0E-36	AA148034.1	EST HUMAN	z01a12.R1 Stragelens endothelial cell 507223 Homo sapiens cDNA clone IMAGE:590986 5'
6640	16520	26712	2.03	1.0E-36	AA148034.1	EST HUMAN	z01a12.R1 Stragelens endothelial cell 507223 Homo sapiens cDNA clone IMAGE:590986 5'
7220	17997	27267	2.84	1.0E-36	U109558.1	EST HUMAN	xw52507.07 NT_OGAP_Br35c Homo sapiens cDNA clone IMAGE:2614357 3'
7624	17074	27191	4.06	1.0E-36	BE94168.1	EST HUMAN	0V3-NH1022-010500-189-101 NH1023 Homo sapiens cDNA

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID No.	Exon SEQ ID No.	ORF SEQ ID No.	Expression Signal	Most Similar (Top) HK BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8317	18164	26144	3.43	1.0E-36	AW897636.1	EST_HUMAN	CMS-NN0081-140400-147-H12-NN0081 Homo sapiens cDNA
8086	18174	26857	3.91	1.0E-36	AW504143.1	EST_HUMAN	UHFH-DNO-jlc-03-CJUI-1 NH <sub>2</sub> MGC_50 Homo sapiens cDNA clone IMAGE:3076277 5'
8203	18934		3.74	1.0E-36	11418177	NT	Homo sapiens Ran GTPase activating protein 1 (RANGAP1), mRNA
9374	18940	25008	1.28	1.0E-36	11418121	NT	Homo sapiens chromosome 22 open reading frame 2 (C22ORF2), mRNA
9947	18214		3.07	1.0E-36	AL163213.2	NT	Homo sapiens chromosome 22 segment HS21 (013)
9890	18371		2.89	1.0E-36	AF002723.1	NT	Homo sapiens Sad1 unc-84 domain protein 2 (SUN2), mRNA, partial cds
6368	18231	25360	1.60	9.0E-37	AF002727.1	EST_HUMAN	ws80607.x1 NCI CGAP_C63 Homo sapiens cDNA clone IMAGE:2504246 3'
6368	18231	25391	1.90	9.0E-37	AF002727.1	EST_HUMAN	ws80607.x1 NCI CGAP_C63 Homo sapiens cDNA clone IMAGE:2504246 3'
9462	18363		2.79	9.0E-37	N72618.1	EST_HUMAN	7304 Human retina cDNA, Top598-cleaved subtilisin Homo sapiens cDNA not directional
5143	15010	24781	1.38	8.0E-37	AB22984.1	NT	Homo sapiens mRNA for KIA00877 protein, partial cds
5213	16136		1.7	8.0E-37	BE69077.1	EST_HUMAN	OMUJUT0003-060000-503-409 UT0003 Homo sapiens cDNA
							H08601.x1 NCI CGAP_C63 Kd13 Homo sapiens cDNA clone IMAGE:3148258 3' similar to contains MER29.b3
5556	15715	25547	4.11	8.0E-37	BE350127.1	EST_HUMAN	MER26 repeat element
5559	15715	25548	4.11	8.0E-37	BE350127.1	EST_HUMAN	H08601.x1 NCI CGAP_C63 Kd13 Homo sapiens cDNA clone IMAGE:3148258 3' similar to contains MER29.b3
5584	15693	25576	5.93	8.0E-37	AW840840.1	EST_HUMAN	MER26 repeat element
							H13-JN0008-210100-012-409_1 CN0008 Homo sapiens cDNA
6892	16482	26870	8.25	8.0E-37	X87344.1	NT	H sapiens DNA, DMB, HLA-21, IFP2, LUP2, TAP2, DOB, DQ82 and RING8, 9, 13 and 14
1283	11170		2.91	7.0E-37	AL04890.1	EST_HUMAN	Genes
8140	16028	26274	8.77	7.0E-37	AB17700.1	EST_HUMAN	DKFZp484E422.1 (434 (synonym: hhs3)) Homo sapiens cDNA clone DKFZp484E422.5
							PT85 repetitive element
							tns1/g03.x1 NCI CGAP_C63 Homo sapiens cDNA clone IMAGE:2105140 3' similar to contains L1.03.L1
							Repetitive element
8298	19148	26388	4.16	7.0E-37	AB09702.1	EST_HUMAN	Homo sapiens Sad1 unc-84 domain protein 2 (SUN2), mRNA, partial cds
9775	15292		2.48	6.0E-37	AF702723.1	NT	Homo sapiens cDNA clone 52910 similar to human S1S G04101
5707	15615	25716	3.37	6.0E-37	AA0307123.1	EST_HUMAN	EST178038 Odon carthagen (HCO) cell line Homo sapiens cDNA 5' and
5707	15615	25717	3.37	6.0E-37	AA0307123.1	EST_HUMAN	EST178038 Odon carthagen (HCO) cell line Homo sapiens cDNA 5' and
8292	18211		4.17	6.0E-37	7657117	NT	Homo sapiens glycine C-aminotransferase (2-amino-3-oxobutanoate-CoA ligase) (GCA1), mRNA
9168	18831		3.57	6.0E-37	AF14973.1	NT	Homo sapiens NOD1 protein (NOD1) gene, exons 1, 2, and 3
2374	12254	22146	2.23	4.0E-37	AA102704.1	EST_HUMAN	z80004.1 Soares, field liver, spleen, INFIL.S1 Homo sapiens cDNA clone IMAGE:448015 3'
5190	15227		1.11	4.0E-37	N62051.1	EST_HUMAN	EST16210 WATM1 Homo sapiens cDNA clone 52910 similar to human S1S G04101
1970	11693	21765	2.85	3.0E-37	AL04890.1	EST_HUMAN	DKFZp484L218.1 (434 (synonym: hhs3)) Homo sapiens cDNA clone DKFZp484L218
1970	11693	21766	2.85	3.0E-37	AL04890.1	EST_HUMAN	DKFZp484L218.1 (434 (synonym: hhs3)) Homo sapiens cDNA clone DKFZp484L218
2465	12341		1.7	3.0E-37	AW897150.1	EST_HUMAN	EST1732222 IMAGE reassessments, MAGF Homo sapiens cDNA
2595	12683		3.02	3.0E-37	AW897150.1	EST_HUMAN	EST1732222 IMAGE reassessments, MAGF Homo sapiens cDNA

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1064	10580	20524	1.94	2.0E-37	AU131202.1	EST_HUMAN	AU131202.NT2P3 Homo sapiens cDNA clone NT2P3002196 5'
1064	10580	20524	1.94	2.0E-37	AU131202.1	EST_HUMAN	AU131202.NT2P3 Homo sapiens cDNA clone NT2P3002196 5'
1921	11916	21065	1.47	2.0E-37	AL163247.2	NT	Homo sapiens chromosome 21 segment HS21C047
3818	13730	23519	5.05	2.0E-37	4803210	NT	Homo sapiens cytochrome P450, subfamily XXVIIA (steroid 27-hydroxylase, cerebrolindole xanthinohydrolase), polypeptide 1 (CYP27A1) mRNA
8007	15612	26538	3.36	2.0E-37	AA346720.1	EST_HUMAN	EST52031 Fetal heart II Homo sapiens cDNA 5' end
6955	16565	28756	3.23	2.0E-37	BF204032.1	EST_HUMAN	60169157.F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4111409 5'
6645	16557	28545	16.4	2.0E-37	AF176013.1	NT	Homo sapiens J domain containing protein 1 isoform b (JDP1) mRNA, complete cds
9633	16033	21628	3.15	2.0E-37	11417672	NT	Homo sapiens pascadillo (zabrafish) homolog 1, containing BRCT domain (PES1), mRNA
2041	11632	21628	3.81	1.0E-37	AL163261.2	NT	Homo sapiens chromosome 21 segment HS21C081
3878	13760	23577	22.61	1.0E-37	AF180011.1	NT	Homo sapiens ribonuclease III (RNS) mRNA, complete cds
4072	13074	23763	0.96	1.0E-37	BE72955.1	EST_HUMAN	60144916.F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3852652 5'
4867	14737	24617	2.13	1.0E-37	BF371761.1	EST_HUMAN	OY0160180.2807700-318-c10 N0180 Homo sapiens cDNA
7072	16549	27141	2.85	1.0E-37	AA174106.1	EST_HUMAN	2521802.21 Spinegata neuroepithelium (8937231) Homo sapiens cDNA clone IMAGE:610056 5' similar to conical L1 L211, positive element
8362	17573	28222	20.50	1.0E-37	U22378.1	EST_HUMAN	Homo sapiens cytochrome c (HCC1) processed pseudogene, complete cds
9500	18122	23461	2.40	1.0E-37	DE17761.1	EST_HUMAN	QMG-FT0086-140700-248-407 FT0086 Homo sapiens cDNA
5530	15447	25514	3.05	9.0E-38	10046432	NT	Rattus norvegicus multidomain presynaptic cytomatrix protein Piccolo (LOC58769), mRNA
1203	11113	20550	1.95	8.0E-38	11436955	NT	Homo sapiens Grb2-associated binder 2 (GABGB2), mRNA
2448	12526	22226	1.44	6.0E-38	BF348221.1	EST_HUMAN	602016401.F1 NCI_CGAP_Bms7 Homo sapiens cDNA clone IMAGE:4158692 5'
6568	11113	20550	1.36	8.0E-38	11436955	NT	Homo sapiens Grb2-associated binder 2 (GABGB2), mRNA
2135	12023	21020	1.38	7.0E-38	AW167265.1	EST_HUMAN	EST1394620 MAGE ressequencing, MAGEL Homo sapiens cDNA
9005	12833	22726	1.70	6.0E-38	BF033033.1	EST_HUMAN	601457722.F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3850346 5'
5432	15352	25407	1.69	6.0E-38	11425114	NT	Homo sapiens zinc finger protein ZNF287 (ZNF287), mRNA
5432	15352	25408	1.69	6.0E-38	11425114	NT	Homo sapiens zinc finger protein ZNF287 (ZNF287), mRNA
9000	16342	25266	4.46	6.0E-38	11435947	NT	Homo sapiens chromosome 12 open reading frame 3 (C12ORF3), mRNA
9542	16743	25266	6.88	6.0E-38	AB02056.1	NT	Homo sapiens DNA for Human P2M, complete cds
710	10642	20468	1.15	5.0E-38	AW167181.1	EST_HUMAN	EST1393506 MAGE ressequencing, MAGEL Homo sapiens cDNA
2404	12281	22778	1.76	5.0E-38	AW167181.1	NT	Homo sapiens RIBIR gene (partial), exon 8
6191	10076	20225	2.42	6.0E-38	BE071910.1	EST_HUMAN	601450148.F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3850474 5'
113	10392	19509	2.50	4.0E-39	225465.1	NT	B. laurus mitochondrial aspartate aminotransferase mRNA, complete CDS
113	10392	19510	2.50	4.0E-39	225465.1	NT	B. laurus mitochondrial aspartate aminotransferase mRNA, complete CDS
1141	11055	20897	0.82	3.0E-39	11435947	NT	Homo sapiens chromosome 12 open reading frame 3 (C12ORF3), mRNA
2053	11643		4.39	3.0E-39	AF003530.1	NT	Homo sapiens homeobox protein CDX4 (CDX4) gene, complete cds and flanking repeat regions

Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3638	13522		1.11	3.0E-38	754907	NT	Homo sapiens HIRA Interacting protein 4 (hira4-like) (HIRA4), mRNA
3781	13893	23460	1.65	3.0E-38	P53338	SWISSPROT	SSU72 PROTEIN
3781	13893	23460	1.65	3.0E-38	P53338	SWISSPROT	SSU72 PROTEIN
4513	14006		0.85	3.0E-38	BE76901.1	EST_HUMAN	601157633F1 NH MGCC_21 Homo sapiens cDNA clone IMAGE3904272 5'
6050	14456	26083	7.17	3.0E-38	AL163300.2	NT	Homo sapiens chromosome 21 segment HS21C100
6476	16337	26904	7.64	3.0E-38	BF373864.1	EST_HUMAN	GMS-FT0181-140700-241-407 FT0181 Homo sapiens cDNA
7025	16602	27094	1.78	3.0E-38	H85494.1	EST_HUMAN	W68B04.1T Sources melanocyte 2N5H/M Homo sapiens cDNA clone IMAGE246773 5'
7025	16602	27095	1.78	3.0E-38	H85494.1	EST_HUMAN	W68B04.1T Sources melanocyte 2N5H/M Homo sapiens cDNA clone IMAGE246773 5'
7127	17577		1.58	3.0E-38	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C048
44	10032	19336	1.41	2.0E-38	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C048
1358	11284	21120	2.6	2.0E-38	6902027	NT	Homo sapiens SMY3 (repressor of mif bvo 3, yeast) homolog 2 (SMY3H2), mRNA
1627	11531	21390	1.06	2.0E-38	AA437553.1	EST_HUMAN	SW-MA12, RABIT P42701 MANNO5YL-OLIGOSACCHARIDE ALPHA-1,2-MANNOSIDASE
1627	11531	21391	1.89	2.0E-38	AA437553.1	EST_HUMAN	SW-MA12, RABIT P42701 MANNO5YL-OLIGOSACCHARIDE ALPHA-1,2-MANNOSIDASE
6841	3819		4.7	2.0E-38	BE165900.1	EST_HUMAN	MRCH10487-150200-135-001 H10487 Homo sapiens cDNA
7916	17162		1.47	2.0E-38	BE22256.1	EST_HUMAN	h05902-1 NCI C52A9_L221 Homo sapiens cDNA clone IMAGE3186130 5' similar to TR-002710 O02710
7970	17520	26383	1.65	2.0E-38	D34473.2	NT	Homo sapiens mRNA for KIA0145 protein, partial cds
8781	18596	23855	8.24	2.0E-38	BE172790.1	EST_HUMAN	Q12-H10595-060500-235-405 H10595 Homo sapiens cDNA
8807	18716	26068	3.99	2.0E-38	AF160501.1	NT	Homo sapiens leucine-rich repeat-containing G protein-coupled receptor 9 (LGR9) mRNA, partial cds
8907	18716	26068	3.99	2.0E-38	AF160501.1	NT	Homo sapiens leucine-rich repeat-containing G protein-coupled receptor 9 (LGR9) mRNA, partial cds
9112	18879		4.05	2.0E-38	AV726988.1	EST_HUMAN	AV726988 HTC Homo sapiens cDNA clone LTCX007 5'
9115	18879		2	2.0E-38	AB012723.1	NT	Homo sapiens gene for kinesin-like protein, complete cds
9412	19064	29513	3.86	2.0E-38	H55941.1	EST_HUMAN	CHR22D590 Chromosome 22 exon Homo sapiens cDNA clone C22_788 5'
9472	19069		2.26	2.0E-38	S74506.1	NT	E11beta-pyruvate dehydrogenase beta (promoter) [human, placenta, Genomic, 1280 nt]
9524	19396		2.56	2.0E-38	11418248	NT	Homo sapiens sulfotransferase-related protein (SULTX3), mRNA
1077	10993		2.20	1.0E-38	AA401570.1	EST_HUMAN	z65902.1 Sources, testis, NHT Homo sapiens cDNA clone IMAGE742539 5' similar to contains element MERT19 repetitive element
1954	11546	21736	0.94	1.0E-38	4885298	NT	Homo sapiens guanine nucleotide binding protein-like 1 (GNL1), mRNA
1973	11666	21759	1	1.0E-38	78610990	NT	Homo sapiens KIAA0173 gene product (KIAA0173), mRNA
2445	12022	22221	1.58	1.0E-38	AF770831.1	NT	Homo sapiens cyclin K (CONK) gene, exon 7

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Table 4

Single Exon Probes Expressed In Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4063	13005	23749	1.41	1.0E-38	AB037893.1	NT	Homo sapiens mRNA for KIAA1442 protein, partial cds
4223	14121	23866	0.83	1.0E-38	4509716	NT	Homo sapiens low density lipoprotein receptor-related protein 6 (LRP6) mRNA, and translated products
4226	14127	23902	1.31	1.0E-38	AL163203.2	NT	Homo sapiens chromosome 21 segment HS27C003
4226	14127	23903	1.31	1.0E-38	AL163203.2	NT	Homo sapiens chromosome 21 segment HS27C003
4463	14387	24173	1.21	1.0E-38	8922543	NT	Homo sapiens hypothetical protein FLJ10800 (FLJ10800) mRNA
5673	15582	25682	3.61	1.0E-38	7305390	NT	Mus musculus obagelin (Obag), mRNA
5673	15582	25683	3.61	1.0E-38	7305390	NT	Mus musculus obagelin (Obag), mRNA
6376	16240	28000	2.78	1.0E-38	AB014512.1	NT	Homo sapiens mRNA for KIAA0912 protein, partial cds
7414	17881	27486	6.23	1.0E-38	BE350127.1	EST_HUMAN	HOMO01.x1 NCL CGAP KIA013 Homo sapiens cDNA clone IMAGE3146256 3' similar to contains MER29.53
8264	19481	2138	2.39	1.0E-38	AL163284.2	NT	Homo sapiens chromosome 21 segment HS27C084
943	10358	19842	6.14	8.0E-39	4502012	NT	Homo sapiens ATPase, H+ transporting, vesicular (vesicular proton pump) (VATPase) mRNA
1372	11278	21134	1.51	8.0E-39	4756228	NT	Homo sapiens estrogen receptor-binding fragment-associated gene 6 (EBAG6) mRNA
1786	11688	21832	1.06	8.0E-39	AB23404.1	EST_HUMAN	WASR10.x1 NCL CGAP Kc11 Homo sapiens cDNA clone IMAGE238491 3' similar to TRP-77890 P67890
2047	11688	21832	6.54	7.0E-39	AL163227.2	NT	POL PROTEIN 1
8164	18070	26519	2.12	6.0E-39	B133158.1	EST_HUMAN	QY1-B10037-040803-307-402 B10037 Homo sapiens cDNA
8638	19337	26519	2.23	8.0E-39	BE07094.1	EST_HUMAN	7634603.x1 NCL CGAP LU24 Homo sapiens cDNA clone IMAGE3294366 3' similar to WP R151.6
991	10612	20757	1.3	5.0E-39	AF003538.1	NT	CE00808 ; Homo sapiens X-tandem anhidrotic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
2057	12884	22682	6.13	5.0E-39	A1730154.1	EST_HUMAN	a68004.x1 Barleed color HPLB7 Homo sapiens cDNA clone IMAGE2374003 3' similar to TR Q15408
6050	19154	20291	1.54	5.0E-39	11420289	NT	Q15408 HUMAN PROTEINASE LARGE SUBUNIT, contains TR LTR repetitive element ;
538	10470	20291	10.83	4.0E-39	AB015810.1	NT	Homo sapiens hypothetical protein FLJ10803 (FLJ10803), mRNA
3525	13441	23238	0.96	4.0E-39	AL163210.2	NT	Chlorococcus salicaps mRNA for ribosomal protein S4X, complete cds
6707	16587	20775	1.49	4.0E-39	AA082946.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C010
9575	16164	19756	3.03	4.0E-39	11418177	NT	se05g04.1 Stralagen schizo brain S111 Homo sapiens cDNA clone IMAGE1020433 3' similar to contains ORF1b1 ORF repetitive element ;
9687	16240	18300	2.08	4.0E-39	BE335452.1	EST_HUMAN	Homo sapiens Ran GTPase scaffolding protein 1 (RAN-GAP), mRNA
41	10028	18300	11.27	3.0E-39	AA031946.1	EST_HUMAN	QV0-FR0065-260500-276-006 FN0003 Homo sapiens cDNA
41	10028	18301	11.27	3.0E-39	AA031946.1	EST_HUMAN	fn01616 Regional genomic DNA specific cDNA library Homo sapiens cDNA clone CR12.1
41	10028	18301	11.27	3.0E-39	AA031946.1	EST_HUMAN	fn01616 Regional genomic DNA specific cDNA library Homo sapiens cDNA clone CR12.1



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Table 4

Single Exon Probe Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
41	10029	19832	11.27	3.0E-39	AA631948.1	EST_HUMAN	frnc181 Regional genomic DNA specific cDNA library Homo sapiens cDNA clone OR12-1 oc63a10 at Scovos, NH-HMP, S1 Homo sapiens cDNA clone IMAGE:160086 3' similar to SW:G17R5, RAT P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE;
9104	18871	28781	5.51	3.0E-39	A094557.1	EST_HUMAN	oc63a10 at Scovos, NH-HMP, S1 Homo sapiens cDNA clone IMAGE:160086 3' similar to SW:G17R5, RAT P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE;
9104	18871	28782	5.51	3.0E-39	A094557.1	EST_HUMAN	oc63a10 at Scovos, NH-HMP, S1 Homo sapiens cDNA clone IMAGE:160086 3' similar to SW:G17R5, RAT P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE;
9147	18901	28782	4.42	3.0E-39	A37093.1	EST_HUMAN	oc63a10 at Scovos, NH-HMP, S1 Homo sapiens cDNA clone IMAGE:160086 3' similar to SW:G17R5, RAT P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE;
879	10905	28782	4.03	2.0E-39	BE09203.1	EST_HUMAN	oc63a10 at Scovos, NH-HMP, S1 Homo sapiens cDNA clone IMAGE:160086 3' similar to SW:G17R5, RAT P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE;
884	10920	28782	17.44	2.0E-39	AE03519.1	EST_HUMAN	oc63a10 at Scovos, NH-HMP, S1 Homo sapiens cDNA clone IMAGE:160086 3' similar to SW:G17R5, RAT P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE;
1013	10953	28782	3.61	2.0E-39	AF000373.1	EST_HUMAN	oc63a10 at Scovos, NH-HMP, S1 Homo sapiens cDNA clone IMAGE:160086 3' similar to SW:G17R5, RAT P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE;
1513	11418	28782	10.15	2.0E-39	AY372318.1	EST_HUMAN	oc63a10 at Scovos, NH-HMP, S1 Homo sapiens cDNA clone IMAGE:160086 3' similar to SW:G17R5, RAT P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE;
1920	11628	21707	10.03	2.0E-39	AA726574.1	EST_HUMAN	oc63a10 at Scovos, NH-HMP, S1 Homo sapiens cDNA clone IMAGE:160086 3' similar to SW:G17R5, RAT P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE;
2587	12458	22549	1.75	2.0E-39	AL133246.2	EST_HUMAN	oc63a10 at Scovos, NH-HMP, S1 Homo sapiens cDNA clone IMAGE:160086 3' similar to SW:G17R5, RAT P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE;
4303	14201	23865	1.36	2.0E-39	BF70207.1	EST_HUMAN	oc63a10 at Scovos, NH-HMP, S1 Homo sapiens cDNA clone IMAGE:160086 3' similar to SW:G17R5, RAT P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE;
5375	15295	25142	3.4	2.0E-39	AA068960.1	EST_HUMAN	oc63a10 at Scovos, NH-HMP, S1 Homo sapiens cDNA clone IMAGE:160086 3' similar to SW:G17R5, RAT P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE;
6300	16223	25584	2.17	2.0E-39	AA068960.1	EST_HUMAN	oc63a10 at Scovos, NH-HMP, S1 Homo sapiens cDNA clone IMAGE:160086 3' similar to SW:G17R5, RAT P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE;
8731	18887	28874	2.33	2.0E-39	D86964.1	NT	oc63a10 at Scovos, NH-HMP, S1 Homo sapiens cDNA clone IMAGE:160086 3' similar to SW:G17R5, RAT P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE;
6922	16964	28874	2.31	2.0E-39	11425464	NT	oc63a10 at Scovos, NH-HMP, S1 Homo sapiens cDNA clone IMAGE:160086 3' similar to SW:G17R5, RAT P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE;
1497	11401	21267	1.76	1.0E-39	AJ006945.1	NT	oc63a10 at Scovos, NH-HMP, S1 Homo sapiens cDNA clone IMAGE:160086 3' similar to SW:G17R5, RAT P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE;
1497	11401	21262	1.76	1.0E-39	AJ006945.1	NT	oc63a10 at Scovos, NH-HMP, S1 Homo sapiens cDNA clone IMAGE:160086 3' similar to SW:G17R5, RAT P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE;
1514	11419	21275	4.95	1.0E-39	7697020	EST_HUMAN	oc63a10 at Scovos, NH-HMP, S1 Homo sapiens cDNA clone IMAGE:160086 3' similar to SW:G17R5, RAT P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE;
4581	14453	24239	5.49	1.0E-39	AW051965.1	EST_HUMAN	oc63a10 at Scovos, NH-HMP, S1 Homo sapiens cDNA clone IMAGE:160086 3' similar to SW:G17R5, RAT P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE;
4561	14453	24240	5.49	1.0E-39	AW051965.1	EST_HUMAN	oc63a10 at Scovos, NH-HMP, S1 Homo sapiens cDNA clone IMAGE:160086 3' similar to SW:G17R5, RAT P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE;
4604	14462	24279	8.86	1.0E-39	7697020	EST_HUMAN	oc63a10 at Scovos, NH-HMP, S1 Homo sapiens cDNA clone IMAGE:160086 3' similar to SW:G17R5, RAT P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE;
5459	15379	25439	1.54	1.0E-39	T80876.1	EST_HUMAN	oc63a10 at Scovos, NH-HMP, S1 Homo sapiens cDNA clone IMAGE:160086 3' similar to SW:G17R5, RAT P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE;
5476	15395	25460	4.36	1.0E-39	AJ276170.1	NT	oc63a10 at Scovos, NH-HMP, S1 Homo sapiens cDNA clone IMAGE:160086 3' similar to SW:G17R5, RAT P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE;
5476	15395	25461	4.36	1.0E-39	AJ276170.1	NT	oc63a10 at Scovos, NH-HMP, S1 Homo sapiens cDNA clone IMAGE:160086 3' similar to SW:G17R5, RAT P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE;
6983	16028	25461	1.69	1.0E-39	11439726	NT	oc63a10 at Scovos, NH-HMP, S1 Homo sapiens cDNA clone IMAGE:160086 3' similar to SW:G17R5, RAT P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE;
6987	16220	25582	1.75	1.0E-39	D78132.1	NT	oc63a10 at Scovos, NH-HMP, S1 Homo sapiens cDNA clone IMAGE:160086 3' similar to SW:G17R5, RAT P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE;
545	10464	20294	1.67	9.0E-40	5903210	NT	oc63a10 at Scovos, NH-HMP, S1 Homo sapiens cDNA clone IMAGE:160086 3' similar to SW:G17R5, RAT P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE;
1218	11123	20671	10.19	9.0E-40	4755145	NT	oc63a10 at Scovos, NH-HMP, S1 Homo sapiens cDNA clone IMAGE:160086 3' similar to SW:G17R5, RAT P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE;
1219	11123	20672	10.19	9.0E-40	4755145	NT	oc63a10 at Scovos, NH-HMP, S1 Homo sapiens cDNA clone IMAGE:160086 3' similar to SW:G17R5, RAT P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE;

Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1433	11336	21205	5.04	9.0E-40	4507512	NT	Homo sapiens tissue inhibitor of metalloproteinase 3 (Sorbitol/fundus dystrophy, pseudoinflammatory) (TIMP3) mRNA
3862	15069	23966	3.55	9.0E-40	AB033070.1	NT	Homo sapiens mRNA for KIAA1244 protein, partial cds
4260	14146	23923	0.82	9.0E-40	4507848	NT	Homo sapiens ubiquitin specific protease 13 (isopropylase T-3) (USP13) mRNA
4360	14146	23923	1.12	9.0E-40	4507848	NT	Homo sapiens ubiquitin specific protease 13 (isopropylase T-3) (USP13) mRNA
3004	12632	22725	0.96	8.0E-40	AA078165.1	EST_HUMAN	7H15A04 Chromosome 7 HeLa cDNA Library/Homo sapiens cDNA clone 7H15A04
3847	13768	22725	2.41	8.0E-40	BE536841.1	EST_HUMAN	601288568FT NIH_MGC 8 Homo sapiens cDNA clone IMAGE3619166 5'
6541	16399	26576	1.55	7.0E-40	U60325.1	NT	Human DNA polymerase gamma mRNA, nuclear gene encoding mitochondrial protein, complete cds
6541	16369	26576	1.56	7.0E-40	U60325.1	NT	Human DNA polymerase gamma mRNA, nuclear gene encoding mitochondrial protein, complete cds
8270	18150	26391	2.83	7.0E-40	AL46346.2	NT	Homo sapiens chromosome 21 segment HS21C046
2695	12660	22446	3.86	6.0E-40	AA361275.1	EST_HUMAN	EST70827 T-cell lymphoma Homo sapiens cDNA 5' end similar to zfx finger protein family
2696	12660	22460	3.86	6.0E-40	AA361275.1	EST_HUMAN	EST70827 T-cell lymphoma Homo sapiens cDNA 5' end similar to zfx finger protein family
5516	15581	207	2.07	6.0E-40	BE04765.1	EST_HUMAN	h21091.1 x1 NCI_GCAP_QG8 Homo sapiens cDNA clone IMAGE3210480 3'
6141	15668	26124	3.06	6.0E-40	11436783	NT	Homo sapiens fatty acid desaturase 1 (FADS1), mRNA
6141	15668	26124	3.06	6.0E-40	11436783	NT	Homo sapiens fatty acid desaturase 1 (FADS1), mRNA
7731	17581	27804	6.82	6.0E-40	AV55028.1	EST_HUMAN	AV55028 GJC Homo sapiens cDNA clone GJC06P04 3'
7731	17581	27804	6.82	6.0E-40	AV55028.1	EST_HUMAN	AV55028 GJC Homo sapiens cDNA clone GJC06P04 3'
2561	12433	23226	1.89	5.0E-40	AL163265.2	NT	Homo sapiens chromosome 21 segment HS21C086
1834	17731	21607	1.39	4.0E-40	U696005.1	EST_HUMAN	h21001.1 x1 NCI_GCAP_P128 Homo sapiens cDNA clone IMAGE2248973 3' similar to TR:O73605 O73606 POL PHO1EIN ;
2061	11651	23673	2.67	4.0E-40	AF003526.1	NT	Homo sapiens X-linked anhidrotic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
4291	14180	23673	7.65	4.0E-40	7662171	NT	Homo sapiens KIAA0433 protein (KIAA0433), mRNA
6952	16542	26736	3.76	4.0E-40	AA142806.1	EST_HUMAN	nv44e10.11 NCI_GCAP_B44 Homo sapiens cDNA clone IMAGE:1222122
7237	17114	27906	4.87	4.0E-40	BE006416.1	EST_HUMAN	PMO-BN0167-070500-002-R12 BN0167 Homo sapiens cDNA
7237	17114	27906	4.87	4.0E-40	BE006416.1	EST_HUMAN	PMO-BN0167-070500-002-R12 BN0167 Homo sapiens cDNA
8059	17968	26238	4.07	4.0E-40	AW841585.1	EST_HUMAN	RC1-CH0017-120200-012-c04 CN0017 Homo sapiens cDNA
4040	13943	23721	0.96	3.0E-40	AB265469.1	EST_HUMAN	WH12007 x1 NCI_GCAP_JGRT1 Homo sapiens cDNA clone IMAGE:2380549 3'
0001	15069	26530	6.25	3.0E-40	11417342	NT	Homo sapiens semis domain, seven thrombospondin repeats (type 1 and type 1-like), transmembrane domain (TM) and short cytoplasmic domain, (semaphorin) 5A (SEMA5A), mRNA

Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6882	16761	26956	4.28	3.0E-40	5464167	NT	Homo sapiens HBV associated factor (X45-4) mRNA
7166	17063	27253	1.49	3.0E-40	AF78779.1	NT	Rattus norvegicus putative four repeat on channel mRNA, complete cds
7312	17188	27389	1.52	3.0E-40	AF78779.1	NT	Rattus norvegicus putative four repeat on channel mRNA, complete cds
8387	18264	28515	1.93	3.0E-40	BE350127.1	EST_HUMAN	H00907.1 X1 NCL CGAP_Kid13 Homo sapiens cDNA clone IMAGE:3148256 3' similar to contains MER20.53
8586	18156	28725	11.23	3.0E-40	6005813	NT	MER20 repetitive element ; Homo sapiens serine threonine protein kinase (NDR), mRNA
8855	18607	28954	1.90	3.0E-40	AW118789.1	EST_HUMAN	x48902.x1 Soares, NFL, T, GBC, S11 Homo sapiens cDNA clone IMAGE:2905491 3' similar to TR-Q15904
322	10283	1269	12.69	2.0E-40	AI230336.1	EST_HUMAN	Q15904 Similar to ENV of TYPE A AND TYPE B RETROVIRUSES AND TO CLASS II HIVs ; Q53003.x1 Soares, Insulin, NHT Homo sapiens cDNA clone IMAGE:183847 3'
7771	10707		2.72	2.0E-40	AW30388.1	EST_HUMAN	x24610.x1 NCL CGAP_U14 Homo sapiens cDNA clone IMAGE:2761098 3' similar to SW-R85_MOUSE
1783	11681		1.4	2.0E-40	AV73190.1	EST_HUMAN	F97461.405 RIBOSOMAL PROTEIN S5 ; AV731901 HTF Homo sapiens cDNA clone HITFAZE05 5'
1892	11787	21964	2.19	2.0E-40	4506188	NT	Homo sapiens proteasome (prosome, macropain) subunit, alpha type, 7 (PSMA7) mRNA, end translated products
1892	11787	21965	2.19	2.0E-40	4506188	NT	Homo sapiens proteasome (prosome, macropain) subunit, alpha type, 7 (PSMA7) mRNA, and translated products
2026	11917	21907	1.08	2.0E-40	A095852.1	EST_HUMAN	H09511.x1 NCL CGAP_G09 Homo sapiens cDNA clone IMAGE:2514716 3' similar to TR-Q91629 Q51629
2123	12011	21510	2.81	2.0E-40	5453522	NT	ZINC FINGER PROTEIN ;
2333	12214	22112	2.35	2.0E-40	A277822.1	NT	Homo sapiens adenyl cyclase-associated protein 2 (CAP2) mRNA
2658	12525		1.08	2.0E-40	BE275932.1	EST_HUMAN	Homo sapiens parvulin TTN gene for thin
3087	13014	22806	3.59	2.0E-40	5453522	NT	00121567.F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3345784 5'
4807	14891	21718	1.49	2.0E-40	AL163963.2	NT	Homo sapiens adenyl cyclase-associated protein 2 (CAP2) mRNA
4807	14891	24479	1.48	2.0E-40	AL163963.2	NT	Homo sapiens chromosome 21 segment HS21C080
865	10791		1.65	1.0E-40	AF25599.2	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C080
2690	12451	22343	1.91	1.0E-40	BF036891.1	EST_HUMAN	H014603.F1 NIH_MGC_06 Homo sapiens cDNA clone IMAGE:1007008
2693	12520		1.92	1.0E-40	BE018348.1	EST_HUMAN	6014603.F1 NIH_MGC_06 Homo sapiens cDNA clone IMAGE:3953003 5'
2707	12570	22460	0.92	1.0E-40	BF41030.1	EST_HUMAN	6014603.F1 NIH_MGC_06 Homo sapiens cDNA clone IMAGE:3949570 5' similar to TR-Q6Z198 Q6Z198
2707	12570	22461	0.92	1.0E-40	BF41030.1	EST_HUMAN	SYNTAXIN 17 ;
3258	13181		1.81	1.0E-40	4507142	NT	60208860.F1 NIH_MGC_68 Homo sapiens cDNA clone IMAGE:1067736 5'
4505	14368	24184	6.28	1.0E-40	4508012	NT	Homo sapiens sorting nexin 3 (SNX3) mRNA
4852	14772	24550	0.88	1.0E-40	7705778	NT	Homo sapiens zinc finger protein 200 (ZNF200) mRNA, and translated products
							Homo sapiens CGI-55 protein (LOC31103), mRNA

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Max Similar (Top) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6215	16081	20230	2.03	1.0E-40	AA73201.1	EST_HUMAN	142904.s1 NCI CGAP_AA1 Homo sapiens cDNA clone IMAGE:905167 3'
6215	16081	20231	2.03	1.0E-40	AA73201.1	EST_HUMAN	142904.s1 NCI CGAP_AA1 Homo sapiens cDNA clone IMAGE:905167 3'
8280	18168	28412	5.72	1.0E-40	AU149345.1	EST_HUMAN	4149346 NT25MA Homo sapiens cDNA clone NT25MA4002122 3'
8355	18232	28460	53.3	1.0E-40	AJ239572.1	EST_HUMAN	432110.X1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1949339 3'
9521	19522		3.93	1.0E-40	BF334112.1	EST_HUMAN	FR3270222.271099-002-e10 T10222 Homo sapiens cDNA
6021	16501	20950	1.73	6.0E-41	AL163203.2	NT	Homo sapiens chromosome 21 segment HS210003
811	12276	20586	2.35	7.0E-41	A594384.1	EST_HUMAN	wp04104.s1 NCI CGAP_Kd11 Homo sapiens cDNA clone IMAGE:2463993 3'
8555	15567	25663	3.27	7.0E-41	A594384.1	EST_HUMAN	wp04104.s1 NCI CGAP_Kd11 Homo sapiens cDNA clone IMAGE:2463993 3'
9531	19518		4.82	7.0E-41	11417872	NT	Homo sapiens a disintegrin and metalloproteinase domain 22 (ADAM22), mRNA
270	10244	20664	1.72	6.0E-41	AB037163.1	NT	Homo sapiens pascallaz (catfish) homolog 1, containing BRCT domain (PES1), mRNA
2064	11554	21581	2.19	6.0E-41	7657042	NT	Homo sapiens Drosophila syndrome candidate region 1 (DSOR1), mRNA
4364	14260	24044	0.84	6.0E-41	BE57816.1	EST_HUMAN	60130465F1 NIH MSC_53 Homo sapiens cDNA clone IMAGE:3882677 5'
1751	11660	21532	1.31	5.0E-41	123228.1	EST_HUMAN	X23510.31 Staphylococcus aureus (802/2210) Homo sapiens cDNA clone IMAGE:79628 3'
4078	13622		0.86	5.0E-41	4895638	NT	Homo sapiens homolog of myo1 (Gusac) homolog (TOM) mRNA
8940	18590		2.95	5.0E-41	BE057042.1	EST_HUMAN	PM1510241.251189-002-F11 B10341 Homo sapiens cDNA
385	10332		1.51	4.0E-41	BE156318.1	EST_HUMAN	Q10-H10397-150200-114-g9110397 Homo sapiens cDNA
1062	10668	20530	1.28	4.0E-41	AU118944.1	EST_HUMAN	AU118944 HEMAB1 Homo sapiens cDNA clone HEMAB100585 5'
1388	11269	21149	9.42	4.0E-41	AB027117.1	EST_HUMAN	ov4506.s1 Soares_Parathyroid_tumor_NHPPA Homo sapiens cDNA clone IMAGE:1649794 3' similar to
1388	11263	21160	9.42	4.0E-41	AB027117.1	EST_HUMAN	TR100697 000697 CYTOTOXICOM C-LIKE POLYPEPTIDE, contains LTR.b1 LTR3 repetitive element;
1404	11306	21170	2.12	4.0E-41	AB009881.1	NT	ov4506.s1 Soares_Parathyroid_tumor_NHPPA Homo sapiens cDNA clone IMAGE:1649794 3' similar to
1618	11522	21380	8.5	4.0E-41	AB004006.1	EST_HUMAN	TR100697 000697 CYTOTOXICOM C-LIKE POLYPEPTIDE, contains LTR.b1 LTR3 repetitive element;
2850	12787	22278	3.03	4.0E-41	AJ229041.1	NT	Homo sapiens gene for activin receptor type IIB, complete cds
2850	12787	22279	3.03	4.0E-41	AJ229041.1	NT	TR100697 000697 CYTOTOXICOM C-LIKE POLYPEPTIDE, contains LTR.b1 LTR3 repetitive element;
4052	13954	23730	1.89	4.0E-41	X92885.1	NT	TR100697 000697 CYTOTOXICOM C-LIKE POLYPEPTIDE, contains LTR.b1 LTR3 repetitive element;
5020	18628		1.39	4.0E-41	AV755295.1	EST_HUMAN	TR100697 000697 CYTOTOXICOM C-LIKE POLYPEPTIDE, contains LTR.b1 LTR3 repetitive element;
7500	17441	27657	6.01	4.0E-41	BF04983.1	EST_HUMAN	TR100697 000697 CYTOTOXICOM C-LIKE POLYPEPTIDE, contains LTR.b1 LTR3 repetitive element;
8255	18733		7.62	4.0E-41	AV104960.1	EST_HUMAN	TR100697 000697 CYTOTOXICOM C-LIKE POLYPEPTIDE, contains LTR.b1 LTR3 repetitive element;
9590	19510		2.31	4.0E-41	AV106431.1	EST_HUMAN	TR100697 000697 CYTOTOXICOM C-LIKE POLYPEPTIDE, contains LTR.b1 LTR3 repetitive element;

Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
992	10857	20704	1.64	3.0E-41	AB030176.1	NT	Homo sapiens PAD-H19 mRNA for papillo/jaridhine demethylase type II, complete cds
4240	14136	23914	3.08	3.0E-41	AB026908.1	NT	Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
5047	14919		0.85	3.0E-41	AB037748.1	NT	Homo sapiens mRNA for KIAA1327 protein, partial cds
5376	15295	25143	7.30	3.0E-41	X87089.1	NT	H. sapiens mRNA for putative p53 QLP protein
5849	15765	25973	1.40	3.0E-41	AB037803.1	NT	Homo sapiens mRNA for KIAA1387 protein, partial cds
1782	11448	21005	7.3	2.0E-41	U43701.1	NT	Human ribosomal protein L23a mRNA, complete cds
1915	1910	21688	2.3	2.0E-41	AA331940.1	EST_HUMAN	EST35818 Embryo, 8 week I Homo sapiens cDNA 5' end
2121	12050	21692	1.03	2.0E-41	D46962.1	NT	Human mRNA for KIAA0207 gene, complete cds
2221	12105	22510	4.07	2.0E-41	X69031.1	NT	G. gallus DNA for ZNF560 gene homolog
2768	11465	21005	5.31	2.0E-41	U43701.1	NT	Human ribosomal protein L23a mRNA, complete cds
4521	14414	24000	1.08	2.0E-41	AL163267.2	NT	Homo sapiens chromosome 21 segment HS21C087
4521	14414	24000	1.08	2.0E-41	AL163267.2	NT	Homo sapiens chromosome 21 segment HS21C087
8521	16311	26595	6.36	2.0E-41	AF033944.1	NT	Homo sapiens homolog of Nucleo (Nucleo) mRNA, complete cds
9702	16582	26712	1.33	2.0E-41	U06944.1	NT	Human B-cell specific transcription factor (BSF2) mRNA, complete cds
9702	16582	26713	1.33	2.0E-41	AA328265.1	EST_HUMAN	Human B-cell specific transcription factor (BSF2) mRNA, complete cds
9719	16905	26786	1.30	2.0E-41	P52742	SWISSPROT	ZINC FINGER PROTEIN 135
7188	17005	27265	1.7	2.0E-41	AA375337.1	EST_HUMAN	EST84955 Colon adenocarcinoma IV Homo sapiens cDNA 5' end
8777	18594	28582	3.46	2.0E-41	A4375337.1	EST_HUMAN	EST84955 Colon adenocarcinoma IV Homo sapiens cDNA 5' end
4465	14350	25140	4.84	1.0E-41	A0217988.1	NT	Mus musculus tubulin alpha 6 (Tub6) mRNA
7420	17287	27494	1.8	1.0E-41	A0217988.1	NT	q762c10.D1 Soares, Texas, NHT Homo sapiens cDNA clone IMAGE:176985 3'
9197	18830		2.63	1.0E-41	11526291	EST_HUMAN	Homo sapiens hypothetical protein FLJ20454 (FLJ20454), mRNA
6686	16836		1.33	9.0E-42	BE179191.1	EST_HUMAN	RCOH-T0613-210300-032-g01 HT0618 Homo sapiens cDNA
7352	17168	27367	2.63	9.0E-42	11560191	NT	Homo sapiens hypothetical C2H2 zinc finger protein FLJ2504 (FLJ2504), mRNA
7352	17168	27368	2.63	9.0E-42	11560191	NT	Homo sapiens hypothetical C2H2 zinc finger protein FLJ2504 (FLJ2504), mRNA
455	10359	20216	5.37	8.0E-42	AF003500.1	NT	Homo sapiens homeobox protein G3X4 (G3X4) gene, complete cds and flanking repeat regions
							Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
2092	11952	21646	1.32	8.0E-42	AB026908.1	NT	h07c02.31 NC1 CGAP Thym Homo sapiens cDNA clone IMAGE:945686 similar to TR-G434304 G434304
9238	19875		32.6	8.0E-42	AA493906.1	EST_HUMAN	3076P EXPRESSED SEQUENCE TAG VRNA ;
916	10840		1.83	7.0E-42	AL163265.2	NT	Homo sapiens chromosome 21 segment HS21C085
1812	11709	21960	3.25	6.0E-42	AF012872.1	NT	Homo sapiens phosphatidylinositol 4-kinase 230 (p4K230) mRNA, complete cds
1812	11709	21987	3.25	6.0E-42	AF012872.1	NT	Homo sapiens phosphatidylinositol 4-kinase 230 (p4K230) mRNA, complete cds

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Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Emission Signal	Most Similar (Top) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2244	12/28		3.51	6.0E-42	AW238566.1	EST_HUMAN	xp290b.x1 NCL CGAP_HNT0 Homo sapiens cDNA clone IMAGE-2741799 3' similar to contains L1, t1 L1 repetitive element;
4326	14/14		1.04	6.0E-42	A234770.1	EST_HUMAN	qu24HQ.x1 NCL CGAP_B12 Homo sapiens cDNA clone IMAGE-1965761 similar to contains A11 repetitive element
6355	16/275	25105	1.81	6.0E-42	AB023990.1	NT	Homo sapiens mRNA for KIAA1067 protein, partial cds
6354	16/275	25105	1.72	6.0E-42	AB023990.1	NT	Homo sapiens mRNA for KIAA1067 protein, partial cds
131	10/05		5.44	6.0E-42	AJ271795.1	NT	Homo sapiens Xq pseudautosomal region, segment 1/2
431	10/05	20187	1.17	6.0E-42	BE217913.1	EST_HUMAN	h3141.x1 NCL CGAP_LU24 Homo sapiens cDNA clone IMAGE-3175652 3'
478	10/22		2.84	6.0E-42	5720036	NT	Homo sapiens SET domain and methyltransferase fusion gene (SETMAR) mRNA
479	10/23		1.27	6.0E-42	5720036	NT	Homo sapiens SET domain and methyltransferase fusion gene (SETMAR) mRNA
6016	15/20	20950	1.76	6.0E-42	11433068	NT	Homo sapiens ubiquitin protein ligase E3A (human papilloma virus E6-associated protein, Angelman syndrome) (UBE3A) mRNA
6016	15/20	20951	1.76	6.0E-42	11433068	NT	Homo sapiens ubiquitin protein ligase E3A (human papilloma virus E6-associated protein, Angelman syndrome) (UBE3A) mRNA
6072	16/55	26233	2.76	6.0E-42	11417927	NT	Homo sapiens myofibrillar related protein 3 (MTNR3) mRNA
6274	16/138	26294	1.57	6.0E-42	AF037156.1	NT	Homo sapiens multifunctional calcium/calmodulin-dependent protein kinase II delta2 isoform mRNA, complete cds
7059	16/676	27168	2.76	6.0E-42	AB037716.1	NT	Homo sapiens mRNA for KIAA1224 protein, partial cds
8360	18/243	29494	2.15	6.0E-42	B923162	NT	Homo sapiens hypothetical protein FLJ20163 (FLJ20163), mRNA
736	10/68	20502	8.86	4.0E-42	AF050506.1	NT	Homo sapiens MHC class 1 region
736	10/68	20503	8.86	4.0E-42	AF050506.1	NT	Homo sapiens MHC class 1 region
1030	10/97	20809	2.67	4.0E-42	AF189211.1	NT	Homo sapiens ribonuclease III (RNase) mRNA, complete cds
4100	14/00	23779	1.61	4.0E-42	X59417.1	NT	H. sapiens PROS-27 mRNA
4166	14/05	23930	4.52	4.0E-42	4508466	NT	Homo sapiens regulatory factor X-4 (influences HLA class II expression) (RFK4) mRNA
4490	14/374	24162	10.26	4.0E-42	4508006	NT	Homo sapiens zinc finger protein 177 (ZNF177) mRNA
8041	17/352	26179	2.07	4.0E-42	AW819630.1	EST_HUMAN	RC1-ST0276-04040-016-H11 S10278 Homo sapiens cDNA
8041	17/352	26180	2.07	4.0E-42	AW819630.1	EST_HUMAN	RC1-ST0276-04040-016-H11 S10278 Homo sapiens cDNA
8714	18/33	28815	3.22	4.0E-42	BF035827.1	EST_HUMAN	901469331FT NIH MGCG 66 Homo sapiens cDNA clone IMAGE3862066 5'
8714	18/33	28815	3.22	4.0E-42	BF035827.1	EST_HUMAN	901469331FT NIH MGCG 66 Homo sapiens cDNA clone IMAGE3862066 5'
98	10/94		0.78	3.0E-42	AA468105.1	EST_HUMAN	ab14610.s1 Stratagene lung (#637210) Homo sapiens cDNA clone IMAGE840810 3' similar to contains THR12 THR repetitive element;
1467	11/372	21230	3.63	2.0E-42	BF376834.1	EST_HUMAN	RC2-TN0078-11090-024-027 TN0078 Homo sapiens cDNA
2367	12/241		3.63	2.0E-42	AW869844.1	EST_HUMAN	RC2-TN0078-11090-024-027 TN0078 Homo sapiens cDNA
2375	12/355	22146	2.15	2.0E-42	AW250059.1	EST_HUMAN	28162633 Spime NIH MGCG 7 Homo sapiens cDNA clone IMAGE2816263 3'
3518	15/437	25500	10.2	2.0E-42	AW065393.1	EST_HUMAN	E ST367458 IMAGE resequences, MAGC Homo sapiens cDNA

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar Database Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6516	15437	25501	10.2	2.0E-42	AW065508.1	EST_HUMAN	ES1367438 MAGE resequencing, MAGE Homo sapiens cDNA
7693	17513	27379	1.27	2.0E-42	BC338919.1	EST_HUMAN	0010072847 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3447620 5'
717	10648	20478	1.06	1.0E-42	X57147.1	NT	Human endogenous retrovirus pHE1 (ERV9)
1026	10944	20789	0.96	1.0E-42	AW298009.1	EST_HUMAN	UIH-B1-adh-c4-04-U1.1 NC1 CGAP_Sub0 Homo sapiens cDNA clone IMAGE:2721871 3'
1085	11001	20842	1.11	1.0E-42	AJ251816.1	NT	Homo sapiens partial C9 gene for complement component C9, exon 1
1085	11001	20843	1.11	1.0E-42	AJ251816.1	NT	Homo sapiens partial C9 gene for complement component C9, exon 1
1222	12688	20983	12.76	1.0E-42	AF097106.1	NT	Homo sapiens NADH-ubiquinone oxidoreductase AGGG subunit precursor homolog mRNA, nuclear gene encoding mitochondrial protein, complete cds
1222	12688	20984	12.76	1.0E-42	AF097106.1	NT	Homo sapiens NADH-ubiquinone oxidoreductase AGGG subunit precursor homolog mRNA, nuclear gene encoding mitochondrial protein, complete cds
1873	11576	21443	1.46	1.0E-42	11423219	NT	Homo sapiens rec (LOC51201), mRNA
1866	11576	21772	0.91	1.0E-42	AF10296.1	NT	Homo sapiens PONP1 gene, exon 17
2467	12372	22284	1.98	1.0E-42	5174458	NT	Homo sapiens origin recognition complex, subunit 5 (yeast homolog)-like (ORC5), mRNA, and translated products
2635	12862	22962	8.93	1.0E-42	4505524	NT	Homo sapiens KIA0255 gene product (KIA0255), mRNA
3647	13561	23547	2.16	1.0E-42	7652027	NT	Homo sapiens chromosome 21 segment HS2(C26)
3640	13760	23653	1.02	1.0E-42	AL163367.2	NT	Homo sapiens chromosome 21 segment HS2(C26)
4165	14353	23927	1.72	1.0E-42	AL163367.2	EST_HUMAN	EC3-ST0187-16 (039-013-403 ST0187) Homo sapiens cDNA
4486	14583	24170	0.86	1.0E-42	5803122	NT	Homo sapiens proteasome inhibitor (PS1), mRNA
4640	14528	24316	2.86	1.0E-42	5803122	NT	Homo sapiens proteasome inhibitor (PS1), mRNA
4640	14528	24317	2.86	1.0E-42	5803122	NT	Homo sapiens proteasome inhibitor (PS1), mRNA
4669	14655	24348	5.35	1.0E-42	4506758	NT	Homo sapiens ryanodine receptor 3 (RYR3) mRNA
4769	14654	24442	1.2	1.0E-42	AB0333114.1	NT	Homo sapiens mRNA for KIA01268 protein, partial cds
5048	14820	24493	0.96	1.0E-42	4601612	NT	Homo sapiens a disintegrin and metalloprotease domain 23 (ADAM23) mRNA
5048	14820	24494	0.96	1.0E-42	4601612	NT	Homo sapiens a disintegrin and metalloprotease domain 23 (ADAM23) mRNA
7805	17656	27893	3.80	9.0E-43	4757698	NT	Homo sapiens chromodomain protein, Y chromosome-like (CDYL) mRNA
8397	18273	28526	2.84	9.0E-43	AA45716.1	EST_HUMAN	275907.5.t Soares testis NHT Homo sapiens cDNA clone CBLAK108 5'
6316	10573	20386	12.13	8.0E-43	AV736824.1	EST_HUMAN	AV736824 CB Homo sapiens cDNA clone CBLAK108 5'
636	10573	20387	12.13	8.0E-43	AV736824.1	EST_HUMAN	AV736824 CB Homo sapiens cDNA clone CBLAK108 5'
685	10918	20441	4.33	8.0E-43	8902276	NT	Homo sapiens hypothetical protein FLJ20297 (FLJ20297), mRNA
685	10918	20442	4.33	8.0E-43	8902276	NT	Homo sapiens hypothetical protein FLJ20297 (FLJ20297), mRNA
685	10918	20443	4.33	8.0E-43	8902276	NT	Homo sapiens hypothetical protein FLJ20297 (FLJ20297), mRNA
3586	13503	23262	6.05	7.0E-43	AW246442.1	EST_HUMAN	2822251.Sprime NIH_MGC_7 Homo sapiens cDNA clone IMAGE:2822251 5'

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Description
7062	16869		1.76	7.0E-43	AI895748.1	EST_HUMAN	w69601.x1 NCL CGAP_Bnc25 Homo sapiens cDNA clone IMAGE:2468984 3' similar to TRC15476
1320	11227		10.17	6.0E-43	AA491800.1	EST_HUMAN	O15475 UNIMAC HERV-H PROTEIN contains LTR1 b1 LTR1 repetitive element ;
2547	12421		4.15	6.0E-43	AV708207.1	EST_HUMAN	RIBOSOMAL PROTEIN L30 (HUMAN);
5911	15716	25529	2.02	6.0E-43	9956073	NT	AV708207 ADC Homo sapiens cDNA clone ADCA0010 5'
							Homo sapiens ATP-binding cassette, sub-family C (CFTR/MRP2), member 3 (ABCC3), transcript variant MRP3b, mRNA
9129	15975	20111	2.02	6.0E-43	AW468907.1	EST_HUMAN	h30064.x1 Soares_NFL_T_GBC S1 Homo sapiens cDNA clone IMAGE:2910991 3' similar to contains MER1.13 MER1.MER1 repetitive element ;
7698	17518	27748	1.83	6.0E-43	AA195154.1	EST_HUMAN	z33506.x1 Soares_NHMFu_Pu S1 Homo sapiens cDNA clone IMAGE:965410 5' similar to TRG52641
8449	18322		6.84	6.0E-43	AI191561.1	EST_HUMAN	G429541 DB1, COMPLETE CDS, contains element PTR7 repetitive element ;
137	10111		1.98	5.0E-43	AI05213.2	NT	DKFZ761L1712.1 J1761 (synonym: hsmv2) Homo sapiens cDNA clone DKFZ761L1712.5'
484	10437	20249	3.01	5.0E-43	AA382760.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C013
2616	12748	22539	1.36	5.0E-43	AV732578.1	EST_HUMAN	EST160333 Testis1 Homo sapiens cDNA clone 5' and
7380	17308	27514	4.47	5.0E-43	AA465268.1	EST_HUMAN	AV732578 HTF Homo sapiens cDNA clone HTFANC08 5'
7645	17795	28955	2.2	5.0E-43	AI733244.1	EST_HUMAN	ac33510.x1 NCL CGAP_G0481 Homo sapiens cDNA clone IMAGE:8145055 5'
7694	17814	28953	1.41	5.0E-43	AI48510.1	EST_HUMAN	ac33510.x1 NCL CGAP_G0481 Homo sapiens cDNA clone IMAGE:1569810 3' similar to TRP50561 P90591
9145	18033	26280	6.48	5.0E-43	AA58007.1	EST_HUMAN	DKFZ434019.1 J1434 (synonym: hnc3) Homo sapiens cDNA clone DKFZ43401.19
8338	18215	26468	2.07	5.0E-43	AI29011.1	EST_HUMAN	IMR2-SN007-280400-004-002 SN007 Homo sapiens cDNA
8753	17522	26148	2.68	5.0E-43	X15904.1	NT	5564 Human retina cDNA randomly primed sublibrary Homo sapiens cDNA
							Homo sapiens alpha-actinin
957	12543	20728	4.85	4.0E-43	AF030526.1	NT	Homo sapiens X-linked adrenoleukodystrophy protein gene (EDA), exon 2 and flanking repeat regions
6231	16597		1.72	4.0E-43	11416703	NT	Homo sapiens protocadherin beta 8 (PODHB6), mRNA
6757	16939	20824	4.49	4.0E-43	AI24341.1	EST_HUMAN	q76602.x1 NCL CGAP_K483 Homo sapiens cDNA clone IMAGE:189354 3' similar to contains MER10.13
6757	16939	29825	4.49	4.0E-43	AI24341.1	EST_HUMAN	q76602.x1 NCL CGAP_K483 Homo sapiens cDNA clone IMAGE:189354 3' similar to contains MER10.13
8621	18186	28761	1.8	4.0E-43	TT7380.1	EST_HUMAN	q76602.x1 NCL CGAP_K483 Homo sapiens cDNA clone IMAGE:189354 3' similar to contains MER10.13
9174	18915		1.89	4.0E-43	R29950.1	EST_HUMAN	q76602.x1 Soares testis liver splion INFLS Homo sapiens cDNA clone IMAGE:113827 5'
							q76602.x1 Soares infant brain INB Homo sapiens cDNA clone IMAGE:31303 5' similar to contains MER10
							repetitive element ;
							Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
1195	11105		2.84	3.0E-43	AF223391.1	NT	



Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1699	11671	21437	1.48	3.0E-43	X97869.1	NT	H.sapiens gene encoding La subunit
3624	13440	23237	1.06	3.0E-43	S96002.1	NT	AML-1-EV1-1AAIL-EV1-1 fusion protein (rearranged translocation) [human, leukemic cell line SKH1, mRNA Mutant, 5938 nt]
4193	14093	23972	0.96	3.0E-43	AA549164.1	EST_HUMAN	nl65d60a1 x1 NCL CGAP_P77 Homo sapiens cDNA clone IMAGE:1017419
5837	15743	25965	1.71	3.0E-43	7205300	EST	Mus musculus dogactin (Olog), mRNA
5837	15743	25965	1.71	3.0E-43	7205300	NT	Mus musculus dogactin (Olog), mRNA
6037	15940	25072	3.79	3.0E-43	U65487.1	NT	Human ribosomal RNA upstream binding transcription factor (UBTF) gene, partial cds
6746	16625		6.68	3.0E-43	AA459824.1	EST_HUMAN	sa68911 at Strategene fetal retina 837202 Homo sapiens cDNA clone IMAGE:839413 3' similar to contains THR12 THR repetitive element;
7120	16697	27188	1.18	3.0E-43	7661721	NT	Homo sapiens SET domain and matrix transposase fusion gene (SETMAR) mRNA
8862	18766	26961	2.02	3.0E-43	6720036	NT	Homo sapiens SET domain and matrix transposase fusion gene (SETMAR) mRNA
1771	10146		4.27	2.0E-43	A1190764.1	EST_HUMAN	q8106b.1 Soares, testis, NHT Homo sapiens cDNA clone IMAGE:2721712 3'
8312	18776	25332	1.36	2.0E-43	AW207630.1	EST_HUMAN	UHLB1-af1-c66-U1 s1 NCL CGAP_S143 Homo sapiens cDNA clone IMAGE:2721712 3'
8598	18716		7.63	2.0E-43	U43707.1	NT	Human ribosomal protein L23a mRNA, complete cds
8832	18404		3.38	2.0E-43	T03007.1	EST_HUMAN	FB1G5 Fetal brain, Striatopagus Homo sapiens cDNA clone FB1G5 3'end similar to LINE-1
1630	11634	21364	2.92	1.0E-43	AF154636.1	NT	Homo sapiens Ras-lik GTP-binding protein (RAB27A) gene, exons 1b and 2
1600	11634	21365	2.82	1.0E-43	AF154636.1	NT	Homo sapiens Ras-lik GTP-binding protein (RAB27A) gene, exons 1b and 2
10781	11680	21460	3.36	1.0E-43	AL103294.2	EST_HUMAN	Homo sapiens chromosome 21 segment H521C084
2662	12657	22444	4.96	1.0E-43	BF148253.1	EST_HUMAN	G2022210T1 NCL CGAP_P1607 Homo sapiens cDNA clone IMAGE:4167665 5'
5067	15692	26014	12.07	1.0E-43	4607108	NT	Homo sapiens Sp4 transcription factor (SP4) mRNA
5067	15692	26015	12.07	1.0E-43	4607108	NT	Homo sapiens Sp4 transcription factor (SP4) mRNA
6169	16117	24860	1.63	1.0E-43	R10761.1	EST_HUMAN	Yq40d1.1 Soares Infant brain TNIG Homo sapiens cDNA clone IMAGE:34792 5' similar to SP BD039, MOUSE P8655 BRAIN PROTEIN DN39 ;
6700	16680		1.63	1.0E-43	AF169490.1	EST_HUMAN	Homo sapiens 8x22-1 region and MTG8 (CEFA271) gene, partial cds
7120	17006	27160	26.23	1.0E-43	AW169496.1	EST_HUMAN	EST T375749 IMAGE resequences, MAHG Homo sapiens cDNA
8331	18208	26158	6.76	1.0E-43	A064691.1	EST_HUMAN	wt870d1 x1 NCL CGAP_P1611 Homo sapiens cDNA clone IMAGE:2694705 3'
8672	18690	28644	9.2	1.0E-43	11424378	NT	Homo sapiens calcium channel, voltage-dependent, alpha 1E subunit (CACNA1E), mRNA
9117	18650		3.66	1.0E-43	AL137954.1	EST_HUMAN	DKF27B1D1015.1 T1 B1 (synonym: ham2) Homo sapiens cDNA clone DKF27B1D1015 5'
9405	18059	25511	1.98	1.0E-43	AM75410.1	EST_HUMAN	wt69504.x1 NCL CGAP_P1628 Homo sapiens cDNA clone IMAGE:2313715 3'
9918	19190	29255	2.52	9.0E-44	11418322	NT	Homo sapiens calcium channel, voltage-dependent, alpha 1E subunit (CACNA1E), mRNA
872	10768	20943	6.98	8.0E-44	A1222965.1	EST_HUMAN	q125g01 x1 Soares, NFL1, T, GBC S1 Homo sapiens cDNA clone IMAGE:194552 3'
872	10768	20949	6.98	8.0E-44	A1222965.1	EST_HUMAN	q125g01 x1 Soares, NFL1, T, GBC S1 Homo sapiens cDNA clone IMAGE:194552 3'
6958	16946	27037	3.87	8.0E-44	X94354.1	NT	H.sapiens DNA for Core cGMP-PDE gene

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Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8504	18377	28643	3.39	8.0E-44	Y10488.2	NT	Homo sapiens mRNA for thymidine kinase, partial
8035	18743	29038	5.05	8.0E-44	Z91356.1	NT	Homo sapiens mycristin mRNA, partial cds
9359	19031	25204	2.59	8.0E-44	115273930	NT	Homo sapiens polymerase (RNA) II (DNA directed) polypeptide F (POLR2F), mRNA
9400	18366	25191	1.89	8.0E-44	114180059	NT	Homo sapiens putative nuclear protein (HRHF2122), mRNA
9742	18332	25059	1.75	8.0E-44	114180539	NT	Homo sapiens putative nuclear protein (PRKCAP), mRNA
9885	18369	25191	1.84	8.0E-44	114180059	NT	Homo sapiens putative nuclear protein (HRHF2122), mRNA
643	10580	25191	0.85	7.0E-44	R09435.1	EST_HUMAN	Y68801.11 Soares fetal liver spleen INFLS Homo sapiens cDNA clone IMAGE124620 5'
2187	12074	21078	1.2	7.0E-44	5901888	NT	Homo sapiens LIM domain-containing preferred translocation partner in lipoma (LFP) mRNA
2637	12864	22663	2.2	7.0E-44	AF048726.1	NT	Homo sapiens mitochondrial msa32 repeat region
2637	12864	22664	2.2	7.0E-44	AF048726.1	NT	Homo sapiens mitochondrial msa32 repeat region
2637	12864	22664	2.2	7.0E-44	AF048726.1	NT	Homo sapiens chromosome 21 segment HS21C084
3788	13368	23085	2.38	7.0E-44	U16394.2	NT	Homo sapiens chromosome 21 unknown mRNA
4148	14046	23221	1.17	7.0E-44	AF231016.1	NT	Homo sapiens chromosome 21 unknown mRNA
4148	14046	23221	1.17	7.0E-44	AF231016.1	NT	Homo sapiens chromosome 21 unknown mRNA
9762	18941	28228	2.05	7.0E-44	U156839.1	EST_HUMAN	U156839.1 Homo sapiens cDNA clone Y7844100463 3'
8688	18791	29080	2.81	8.0E-44	AW064050.1	EST_HUMAN	EST3681700 IMAGE transcripts, IMAGE Homo sapiens cDNA
300	10264	21080	2.52	5.0E-44	AJ268560.1	NT	Homo sapiens KIA00871 gene (partial), XTS gene and LZTFL1 gene
329	10288	21080	2.04	5.0E-44	AJ268560.1	NT	Homo sapiens KIA00871 gene (partial), XTS gene and LZTFL1 gene
6005	18498	28972	3.79	5.0E-44	AB068223.1	EST_HUMAN	h44003.1 NCL CGAP_Bim25 Homo sapiens cDNA clone IMAGE:2770085 3' similar to contains OPR.H
7399	17317	29080	2.86	5.0E-44	AF042471.1	EST_HUMAN	ORF ORF repetitive element
3368	13287	23086	2.9	4.0E-44	AL03303.2	NT	U124877 NT28M4 Homo sapiens cDNA clone NT28M4002018 5'
8594	18433	28702	13.3	4.0E-44	U06978.1	NT	Homo sapiens chromosome 21 segment HS21C103
1746	11646	28702	1.07	3.0E-44	0912477	NT	Homo sapiens carboxy terminal LIM domain protein (CLIM) mRNA, complete cds
2485	12360	22254	1.54	3.0E-44	BE38026.1	EST_HUMAN	Homo sapiens keratoprotein alpha 6 (Importin alpha 7) (PNA6), mRNA
3035	12886	22777	6.08	3.0E-44	AA160951.1	EST_HUMAN	601491529F1 NIH MG-69 Homo sapiens cDNA clone IMAGE:3893839 5'
1033	10951	20793	2.76	2.0E-44	4826095	EST_HUMAN	zrlB05.17 Stratagene fetal retina 837202 Homo sapiens cDNA clone IMAGE:009777 5'
1033	10951	20794	2.76	2.0E-44	4826095	EST_HUMAN	Homo sapiens DEADH (Asp-Glu-Ala-Asp) box polypeptide 1 (DDX1) mRNA
1188	11069	20945	4.63	2.0E-44	5903200	NT	Homo sapiens DEADH (Asp-Glu-Ala-Asp) box polypeptide 1 (DDX1) mRNA
1188	11069	20946	4.63	2.0E-44	5903200	NT	Homo sapiens DEADH (Asp-Glu-Ala-Asp) box polypeptide 1 (DDX1) mRNA
1200	11077	21092	2.79	2.0E-44	AF133555.1	NT	Homo sapiens DEADH (Asp-Glu-Ala-Asp) box polypeptide 1 (DDX1) mRNA
1346	11327	21108	1.49	2.0E-44	BE469326.1	EST_HUMAN	Homo sapiens DEADH (Asp-Glu-Ala-Asp) box polypeptide 1 (DDX1) mRNA
2105	11894	21944	2.03	2.0E-44	AF070951.1	NT	Homo sapiens DEADH (Asp-Glu-Ala-Asp) box polypeptide 1 (DDX1) mRNA
2529	12463	22284	1.1	2.0E-44	D5303.1	NT	Homo sapiens tissue-type bone marrow zinc finger protein 4 mRNA, complete cds
							Human mRNA for integrin alpha subunit, complete cds

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Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2587	12488		3.32	2.0E-44	5901933	NT	Homo sapiens adenosine-related protein complex 4, sigma 1 subunit (CLAPS4), mRNA
3425	13342	23147	1.96	2.0E-44	D87676.1	EST	Homo sapiens DNA for amyloid precursor protein, complete cds
4468	14362	24162	1.76	2.0E-44	AW864378.1	EST_HUMAN	PMA-SN0016-12500-003-404 SN0016 Homo sapiens cDNA
5709	15617	25719	1.39	2.0E-44	11449501	NT	Homo sapiens chemokine (C-C motif) receptor 9 (CCR9), mRNA
6097	15107	24370	1.46	2.0E-44	AF039668.1	NT	Homo sapiens general transcription factor 24 (GTF22) mRNA, alternatively spliced product, complete cds
6383	16245	26406	3.86	2.0E-44	11419226	NT	Homo sapiens glutamate receptor, metabotropic 3 (GRM3), mRNA
6383	16245	26407	3.96	2.0E-44	11419226	NT	Homo sapiens glutamate receptor, metabotropic 3 (GRM3), mRNA
7009	16866	27078	1.88	2.0E-44	BE390358.1	EST_HUMAN	60128691.4FT.NH.MX3. 44 Homo sapiens cDNA clone IMAGE3613595 5'
9022	18916		2.22	2.0E-44	BE24902.1	EST_HUMAN	TCBAP12705 Pediatric eye-B cell acute lymphoblastic leukemia Baylor-HQSC project/CBA Homo sapiens cDNA clone TCBAP2705
9710	19758	24910	2.79	2.0E-44	AB002374.1	NT	Human mRNA for KIAA0376 gene, partial cds
9908	19833		1.38	2.0E-44	1528293	NT	Homo sapiens cat eye syndrome chromosome region, candidate 1 (CECR1), mRNA
46	10334	19839	3.84	1.0E-44	7877334	NT	Homo sapiens Nucleoside diphosphate kinase (NUPK), mRNA
46	10334	19840	3.84	1.0E-44	7877334	NT	Homo sapiens Nucleoside diphosphate kinase (NUPK), mRNA
566	10503	20312	1.86	1.0E-44	AW65132.1	EST_HUMAN	RCT-CT0246-03650-025-H12 CT0246 Homo sapiens cDNA
1179	11050		1.52	1.0E-44	AW694803.1	EST_HUMAN	RCT-BN0038-110300-012-401 BN0038 Homo sapiens cDNA
1555	11480		5.54	1.0E-44	AL103303.2	NT	Homo sapiens chromosome 21 segment HS21C103
2177	12064	21695	3.83	1.0E-44	AA434554.1	EST_HUMAN	z63302.r1 Soares, total, fetus, N22HF9, 9w Homo sapiens cDNA clone IMAGE773763 5' similar to contains THR18 THR repetitive element:
2177	12064	21696	3.83	1.0E-44	AA434554.1	EST_HUMAN	z63302.r1 Soares, total, fetus, N22HF9, 9w Homo sapiens cDNA clone IMAGE773763 5' similar to contains THR18 THR repetitive element:
2237	12716	22024	1.05	1.0E-44	AA390098.1	EST_HUMAN	z88511.r1 Soares, total, NHT Homo sapiens cDNA clone IMAGE726478 5'
							Homo sapiens transcription factor IGEM enhancer 3, JM11 protein, JM6 protein, JM6 protein, T54 protein, JM10 protein, A4 differentiation-dependent protein, triple LIM domain protein 6, and synapophysin genes, complete cds, and L-type calcium channel $\alpha$ -
2732	12594	22489	1.39	1.0E-44	AF196779.1	NT	z63302.r1 Soares, total, fetus, N22HF9, 9w Homo sapiens cDNA clone IMAGE811984 3'
3954	13578		5.08	1.0E-44	AA455895.1	EST_HUMAN	z63302.r1 Soares, total, fetus, N22HF9, 9w Homo sapiens cDNA clone DGB3Y603 5'
5061	14631	24702	0.81	1.0E-44	AJ130756.1	NT	Homo sapiens alpha satellite DNA, M1 monomer type
5061	14631	24703	0.81	1.0E-44	AJ130756.1	NT	Homo sapiens alpha satellite DNA, M1 monomer type
8378	18255		10.75	1.0E-44	AV714608.1	EST_HUMAN	AV714608.DCB Homo sapiens cDNA clone DGB3Y603 5'
8918	18260	28918	4.18	1.0E-44	10022664	EST_HUMAN	Homo sapiens Srsf4 mRNA (SCR repeat) containing (BKG5A2) 2, mRNA
8969	18681	28970	3.43	1.0E-44	AW849697.1	EST_HUMAN	RCT-CT0198-159599-011-C08 CT0198 Homo sapiens cDNA
8969	18681	28971	3.43	1.0E-44	AW849697.1	EST_HUMAN	RCT-CT0198-159599-011-C08 CT0198 Homo sapiens cDNA
4476	14370	24159	1.74	9.0E-45	8922391	NT	Homo sapiens hypothetical protein FL10378 (FL10378), mRNA

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Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Expr SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) HI BLAST Value	Top HI Accession No.	Top HI Database Source	Top HI Descriptor
4476	14370	24160	1.74	9.0E-46	8922891	NT	Human sapiens Tyrosyl-tRNA synthetase (TyrRS) protein (P11037), mRNA
2477	12383	22245	3.9	9.0E-46	5174718	NT	Human sapiens Tyrosyl-tRNA synthetase (TyrRS) protein (P11037), mRNA
5015	14889	24050	7.49	8.0E-45	5174718	NT	Human sapiens Tyrosyl-tRNA synthetase (TyrRS) protein (P11037), mRNA
3899	13800		6.28	6.0E-45	AW157510.1	EST_HUMAN	Human sapiens Tyrosyl-tRNA synthetase (TyrRS) protein (P11037), mRNA
9707	19718		1.40	6.0E-45	11418273	NT	Human sapiens Tyrosyl-tRNA synthetase (TyrRS) protein (P11037), mRNA
874	10300		1.11	5.0E-45	163203.2	EST_HUMAN	Human sapiens Tyrosyl-tRNA synthetase (TyrRS) protein (P11037), mRNA
1987	11852	21789	5.01	5.0E-45	BF333927.1	EST_HUMAN	Human sapiens Tyrosyl-tRNA synthetase (TyrRS) protein (P11037), mRNA
3173	13058	22004	2.01	5.0E-45	A5E33766.1	EST_HUMAN	Human sapiens Tyrosyl-tRNA synthetase (TyrRS) protein (P11037), mRNA
5394	15033	25165	8.83	5.0E-45	AA397781.1	EST_HUMAN	Human sapiens Tyrosyl-tRNA synthetase (TyrRS) protein (P11037), mRNA
7228	17103	27392	1.87	5.0E-45	47992728	NT	Human sapiens Tyrosyl-tRNA synthetase (TyrRS) protein (P11037), mRNA
8940	18748	20043	2.87	6.0E-45	8923698	NT	Human sapiens Tyrosyl-tRNA synthetase (TyrRS) protein (P11037), mRNA
1127	11041	20883	8.96	4.0E-46	Y93838.1	NT	Human sapiens Tyrosyl-tRNA synthetase (TyrRS) protein (P11037), mRNA
2246	12130	22027	1.98	4.0E-45	BE26922.1	EST_HUMAN	Human sapiens Tyrosyl-tRNA synthetase (TyrRS) protein (P11037), mRNA
8913	19192		1.82	4.0E-45	BF578077.1	EST_HUMAN	Human sapiens Tyrosyl-tRNA synthetase (TyrRS) protein (P11037), mRNA
3997	13210		1.17	3.0E-45	Y71480.1	EST_HUMAN	Human sapiens Tyrosyl-tRNA synthetase (TyrRS) protein (P11037), mRNA
8920	16708		1.57	3.0E-45	AV723976.1	EST_HUMAN	Human sapiens Tyrosyl-tRNA synthetase (TyrRS) protein (P11037), mRNA
7104	16981	21773	8.34	3.0E-45	4758451	NT	Human sapiens Tyrosyl-tRNA synthetase (TyrRS) protein (P11037), mRNA
7607	17757	27986	9.37	3.0E-45	AL183227.1	EST_HUMAN	Human sapiens Tyrosyl-tRNA synthetase (TyrRS) protein (P11037), mRNA
7607	17757	27987	8.37	3.0E-45	AL183227.1	EST_HUMAN	Human sapiens Tyrosyl-tRNA synthetase (TyrRS) protein (P11037), mRNA
9814	19800		1.33	3.0E-45	BE92111.1	NT	Human sapiens Tyrosyl-tRNA synthetase (TyrRS) protein (P11037), mRNA
2454	12331		2.17	2.0E-45	AL183218.2	EST_HUMAN	Human sapiens Tyrosyl-tRNA synthetase (TyrRS) protein (P11037), mRNA
2950	12524	22716	0.93	2.0E-45	AJ24215.1	NT	Human sapiens Tyrosyl-tRNA synthetase (TyrRS) protein (P11037), mRNA
6920	15834	29057	4.82	2.0E-45	L01695.1	NT	Human sapiens Tyrosyl-tRNA synthetase (TyrRS) protein (P11037), mRNA
6180	16917	28516	1.75	2.0E-45	BE72184.1	EST_HUMAN	Human sapiens Tyrosyl-tRNA synthetase (TyrRS) protein (P11037), mRNA
8178	18471	28515	27.04	2.0E-45	BE93430.1	EST_HUMAN	Human sapiens Tyrosyl-tRNA synthetase (TyrRS) protein (P11037), mRNA
8616	18388	28652	3.96	2.0E-45	AA458770.1	EST_HUMAN	Human sapiens Tyrosyl-tRNA synthetase (TyrRS) protein (P11037), mRNA
8794	18508	28568	2.13	2.0E-45	AW10280.1	EST_HUMAN	Human sapiens Tyrosyl-tRNA synthetase (TyrRS) protein (P11037), mRNA
8794	18508	28569	2.13	2.0E-45	AW10280.1	EST_HUMAN	Human sapiens Tyrosyl-tRNA synthetase (TyrRS) protein (P11037), mRNA
9853	18543		2.76	2.0E-45	11418157	EST_HUMAN	Human sapiens Tyrosyl-tRNA synthetase (TyrRS) protein (P11037), mRNA

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
118	10349		2.22	1.0E-45	BE398953.1	EST_HUMAN	601284360P1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3600183 5'
403	10349		2.7	1.0E-45	BE398953.1	EST_HUMAN	601284360P1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3600183 5'
464	10407	20227	1.6	1.0E-45	4006412	NT	Homo sapiens RAPA, member of RAS oncogene family (RAP1A), mRNA
1157	11070	20915	1.7	1.0E-45	7657290	NT	Homo sapiens Langerhans cell specific c-type lectin (LANGERIN), mRNA
3065	12992	22784	6.76	1.0E-45	U32169.1	NT	Human pro- $\alpha$ 2 chain of collagen type XI (COL1A2) gene, complete cds
3447	13364	23171	1.04	1.0E-45	8655928	NT	Homo sapiens chromosome 21 open reading frame 1 (C21orf1), mRNA
3526	13442	23239	0.81	1.0E-45	AB04831.1	NT	Homo sapiens mRNA for KIAA1591 protein, partial cds
4376	14274	24055	4.08	1.0E-45	BE350633.1	EST_HUMAN	601280116F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3019603 5'
4884	14765	24441	1.05	1.0E-45	11545726	NT	Homo sapiens ribon protein (NR6A), mRNA
9231	16550	24441	6.22	1.0E-45	BE87843.1	EST_HUMAN	601511268F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3972353 5'
7486	17355	27568	1.25	1.0E-45	AB002297.1	NT	Human mRNA for KIAA0259 gene, partial cds
9231	16550	25568	4.3	1.0E-45	11419029	NT	Homo sapiens protein kinase C, alpha binding protein (PRKCA), mRNA
8415	16570		6.38	1.0E-45	11526231	NT	Homo sapiens hypothetical protein FL20454 (FL20454), mRNA
8421	16570		2.66	1.0E-45	11418177	NT	Homo sapiens Rho GTPase activating protein 1 (RANGAP1), mRNA
9520	16224	25207	3.17	1.0E-45	11418157	NT	Homo sapiens calcium channel, voltage-gated, alpha 1A subunit (CACNA1L), mRNA
6760	16669	26561	2.26	8.0E-46	9910293	NT	Mouse insulin-like growth factor 2 gene (IGF2), mRNA
7015	16985		6.71	9.0E-46	AL163262.2	NT	Homo sapiens chromosome 21 segment HS21009
7960	17835	26077	7.69	9.0E-46	AW24964.1	EST_HUMAN	2622446 Spans NIH_MGC_7 Homo sapiens cDNA clone IMAGE:2132199 3' similar to gbJ03314_m42
2362	12270	22166	8.79	8.0E-46	AA33351.1	EST_HUMAN	1922053X1 NCL_CGAP_Gest4 Homo sapiens cDNA clone IMAGE:2132199 3' similar to gbJ03314_m42
2362	12270	22166	8.79	8.0E-46	AA33351.1	EST_HUMAN	1922053X1 NCL_CGAP_Gest4 Homo sapiens cDNA clone IMAGE:2132199 3' similar to gbJ03314_m42
6662	16372		3.97	8.0E-46	BE167244.1	EST_HUMAN	TUBULIN BETA-1 CHAIN (HUMAN);
4478	14372		6.54	7.0E-46	BE389105.1	EST_HUMAN	RC8177292F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3618119 5'
4701	14387		1.01	7.0E-46	BE064386.1	EST_HUMAN	RC4-BT0310-110300-015-110 BT0310 Homo sapiens cDNA
5683	15592	26680	4.01	7.0E-46	8922708	NT	Homo sapiens hypothetical protein FLJ10847 (FLJ10847), mRNA
5912	15818	25543	1.35	7.0E-46	BF10545.1	EST_HUMAN	601522833F1 NIH_MGC_77 Homo sapiens cDNA clone IMAGE:4042736 5'
9543	19144		1.35	7.0E-46	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21046
							wn31103X1 NCL_CGAP_Uni4 Homo sapiens cDNA clone IMAGE:2437575 3' similar to contains MER19.12
							MER19 repetitive element;
2726	12988	22483	5.53	6.0E-46	AB94381.1	EST_HUMAN	wn31103X1 NCL_CGAP_Uni4 Homo sapiens cDNA clone IMAGE:2437575 3' similar to contains MER19.12
2726	12988	22484	5.53	6.0E-46	AB94381.1	EST_HUMAN	1458910X1 NCL_CGAP_Uni4 Homo sapiens cDNA clone IMAGE:2232853 3' similar to contains MER19.12
5727	15634	25737	8.95	6.0E-46	AB95448.1	EST_HUMAN	SA GENE;

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar BLAST Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8894	17978		3.03	6.0E-46	BE746971.1	EST_HUMAN	601478.040F1 NH <sub>2</sub> MOC_88 Homo sapiens cDNA clone IMAGE:380086 5'
197	10169		6.41	5.0E-46	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
9484	13400	23205	1.12	5.0E-46	BE077194.1	EST_HUMAN	7481g01.x1 LupaL_dorsal_root_ganglion Homo sapiens cDNA clone IMAGE:3276408 3'
3484	13400	23205	1.12	5.0E-46	BE077194.1	EST_HUMAN	7481g01.x1 LupaL_dorsal_root_ganglion Homo sapiens cDNA clone IMAGE:3276408 3'
0039	15942	26074	1.79	5.0E-46	BF980442.1	EST_HUMAN	ncs8607.x1 NCL CGAP Kid1 Homo sapiens cDNA clone IMAGE:3258757 3' similar to TR.O75202
8144	16017	26155	3.52	5.0E-46	BF97229.1	EST_HUMAN	O75202 HOMOLOG OF RAT KIDNEY-SPECIFIC
625	10562		1.51	4.0E-46	AA601143.1	EST_HUMAN	50202164F1 NCL CGAP Bmi1 Homo sapiens cDNA clone IMAGE:4166070 5'
							FIBULIN-1, ISOFORM A PRECURSOR (HUMAN)
1676	11578	21446	3.57	4.0E-46	AW770544.1	EST_HUMAN	H86038.x1 NCL CGAP Lu24 Homo sapiens cDNA clone IMAGE:3008936 3' similar to gp.X14008_mn1
							LYSOZYME C PRECURSOR (HUMAN); contains element MER37 repetitive element;
1676	11578	21447	3.57	4.0E-46	AW770544.1	EST_HUMAN	H86038.x1 NCL CGAP Lu24 Homo sapiens cDNA clone IMAGE:3008936 3' similar to gp.X14008_mn1
2710	12573	22464	3.55	4.0E-46	V13048.1	NT	LYSOZYME C PRECURSOR (HUMAN); contains element MER37 repetitive element;
4320	14217	26095	1.07	4.0E-46	A3501622.1	NT	Human endogenous retrovirus RTVL-82
4320	14217	24000	1.07	4.0E-46	BSY14622.1	NT	Homo sapiens mRNA for KIA0622 protein, partial cds
8338	15268	25952	1.84	4.0E-46	U33652.1	NT	Homo sapiens gamma-3 thymy-oligonucleotide, partial cds
8338	15268	25953	1.84	4.0E-46	U33652.1	NT	Human Ig gamma chain gamma-3 thymy-oligonucleotide, partial cds
9600	16221	25237	1.91	4.0E-46	A5002056.1	NT	Human Ig gamma chain gamma-3 thymy-oligonucleotide, partial cds
4354	14162	23375	0.8	3.0E-46	4503376	NT	Homo sapiens mitogen-activated protein kinase kinase 3 (MAP2K3), mRNA
4056	14552	24343	1.13	3.0E-46	Z73690.1	NT	H. sapiens Ig lambda light chain variable region gene (7c, 11.2) germline; Ig Light-Lambda, Lambda
4986	14552	24344	1.13	3.0E-46	Z73690.1	NT	H. sapiens Ig lambda light chain variable region gene (7c, 11.2) germline; Ig-Light-Lambda, Lambda
7081	16956	27161	8.3	3.0E-46	AB134492.1	EST_HUMAN	WH40d4.x1 NCL CGAP Lu10 Homo sapiens cDNA clone IMAGE:2406160 3' similar to contains THR.b2
8855	18656	26855	2.63	3.0E-46	D31765.1	NT	THR repetitive element;
							Human mRNA for KIA0061 gene, partial cds
819	10747	20594	5.91	2.0E-46	AA459446.1	EST_HUMAN	nc05a00.x1 NCL CGAP Ccd3 Homo sapiens cDNA clone IMAGE:580408 3' similar to contains THR.b2 THR
1542	11447		1.32	2.0E-46	AA278245.1	EST_HUMAN	z12781.1.1 Scores: fwd, rev, spleen, INF1L_S1 Homo sapiens cDNA clone IMAGE:451896 3'
							Homo sapiens Brunt's tyrosine kinase (GTK), alpha-D-galactosidase A (GLA), L4-L4-like ribosomal protein
1623	11527	21395	2.43	2.0E-46	U76027.1	NT	(L4-L4) and FTP3 (FTP-3) genes, complete cds

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Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4989	14779	24555	1.15	2.0E-46	AA366286.1	EST_HUMAN	26546221 Sources, testis, NIH1 Homo sapiens cDNA clone IMAGE:26850 5' similar to SW-RSP1_MOUSE
6418	18380	26442	6.78	2.0E-46	9970689	NT	Q07730 RSP-1 PROTEIN ;
6703	18383		1.17	2.0E-46	BE960161.1	EST_HUMAN	Mus musculus sperm tail associated protein (Slap), mRNA
8571	18439		1.87	2.0E-46	7697233	NT	901448137F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3849297 5'
9157	18428		1.76	2.0E-46	H822894.1	EST_HUMAN	Homo sapiens small acidic protein (IMAGE145032), mRNA
9409	18525		1.44	2.0E-46	H43391.1	EST_HUMAN	97266227F1 NIH_MGC_33 Homo sapiens cDNA clone IMAGE:3907326 5'
9728	18515	25130	3.81	2.0E-46	AV27724.1	EST_HUMAN	97266227F1 Sources fetal liver spleen INFLS Homo sapiens cDNA clone IMAGE:200977 5'
1213	11721	22070	5.19	1.0E-46	4502094	NT	xy7803.1 NCI CGAP_L34 Homo sapiens cDNA clone IMAGE:2755780 3'
2238	12121	22023	4.6	1.0E-46	AV75816.1	EST_HUMAN	Homo sapiens cell division cycle 10 (homologous to CDC10 of S. cerevisiae) (CDC10) mRNA
2351	12331	22128	2.59	1.0E-46	H67330.1	EST_HUMAN	ES1350535 IMAGE: resiquinone, MAGP Homo sapiens cDNA clone 486395
3211	13135	22936	2.81	1.0E-46	AA631912.1	EST_HUMAN	9778602.1 NCI CGAP_P2 Homo sapiens cDNA clone IMAGE:1132385 similar to gpX76717 H sapiens
4772	14658		2.64	1.0E-46	AB23197.1	NT	MT-11 mRNA (HUMAN);
5495	15414	25477	4.18	1.0E-46	BF19470.1	EST_HUMAN	Homo sapiens mRNA for KIA0980 protein, partial cds
5538	19449	25539	5.68	1.0E-46	8923762	NT	7692601.1 NCI CGAP_Oy18 Homo sapiens cDNA clone IMAGE:3643705 3'
5598	19449	25540	5.68	1.0E-46	8923762	NT	Homo sapiens ceratins-alpha 2 protein (HSA272195), mRNA
8368	15414	25477	4.26	1.0E-46	BF19470.1	EST_HUMAN	7692601.1 NCI CGAP_Oy18 Homo sapiens cDNA clone IMAGE:3643705 3'
9168	18623	25546	1.43	1.0E-46	BF33102.1	EST_HUMAN	90297236F1 NCI CGAP_Bm07 Homo sapiens cDNA clone IMAGE:4215588 5'
9825	18977	25546	1.43	1.0E-46	AV11837.1	EST_HUMAN	90297236F1 NCI CGAP_Bm07 Homo sapiens cDNA clone IMAGE:4215588 5'
749	10575		4.51	9.0E-47	A271735.1	NT	AV118377 DCB Homo sapiens cDNA clone DCA1803 5'
							Homo sapiens X4 pseudosubclonal region, segment 1/2
4948	14729	24512	2.61	8.0E-47	AW70928.1	EST_HUMAN	H959402.1 NCI CGAP_L34 Homo sapiens cDNA clone IMAGE:3009534 3' similar to TR-075703 075703
9982	19617	25001	1.84	9.0E-47	11417698	NT	HYPOPHYSAL 12.4 KD PROTEIN ;
1766	11695	21539	14.02	8.0E-47	Y18538.1	NT	Homo sapiens SEC14 (S. cerevisiae)-like 2 (SEC14L2), mRNA
1766	11695	21540	14.02	8.0E-47	Y18538.1	NT	Homo sapiens HLA-G gene, exon 5, individual 19323
							Homo sapiens HLA-G gene, exon 5, individual 19323
2584	12649	22430	1.74	8.0E-47	5459355	NT	Homo sapiens protein phosphatase 2, regulatory subunit B (B56), epsilon isoform (PPP2RBE) mRNA
2889	12917	22712	1.72	8.0E-47	AJ22043.1	NT	Homo sapiens 959 kb contig between AAL1 and CBRT on chromosome 21c22, segment 3/3
2801	12370	22266	3.05	6.0E-47	AL03246.2	NT	Homo sapiens chromosome 21 segment HS21C040
7344	17212	27411	6.27	6.0E-47	AB05189.1	EST_HUMAN	2589402.1 NCI CGAP_KART1 Homo sapiens cDNA clone IMAGE:2296559 3'
5693	15083	25990	5.97	5.0E-47	11423972	NT	Homo sapiens CDC37 (cell division cycle 37, S. cerevisiae, homologue) (CDC37), mRNA
8174	18052		3.21	5.0E-47	MT5590.1	EST_HUMAN	ES100738 Fetal brain, Striatum (ca9504206) Homo sapiens cDNA clone HFGF07

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Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORE SEQ ID NO:	Expression Signal	Most Similar (100%) Hit RST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1379	11284	21140	3.41	4.0E-47	4557/5595	NT	Homo sapiens E1A binding protein p500 (EP300) mRNA
6938	16816	27006	2.05	4.0E-47	BE616483.1	EST_HUMAN	601280486F1 NIH_MGC_39 Homo sapiens cDNA clone IMAGE:362437 5'
6938	16816	27006	2.05	4.0E-47	BE616483.1	EST_HUMAN	601280486F1 NIH_MGC_39 Homo sapiens cDNA clone IMAGE:362437 5'
8905	18713		4.84	4.0E-47	AW15500.1	EST_HUMAN	qx6807.x1 NCI CGAP_Lym12 Homo sapiens cDNA clone IMAGE:2948907 3' similar to SW:INT8_MOUSE
532	10474	20287	1.75	3.0E-47	BE007084.1	EST_HUMAN	Q64253 VIRAL INTEGRATION SITE PROTEIN INT.8, [1]
532	10474	20288	1.75	3.0E-47	BE007084.1	EST_HUMAN	601497039F1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3606721 5'
801	10730	20571	5.17	3.0E-47	N57483.1	EST_HUMAN	601497039F1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3606721 5'
930	10555	20703	9.9	3.0E-47	AL163264.2	NT	Y64804.1 Soares, multiple sclerosis, 20k3MSP Homo sapiens cDNA clone IMAGE:277327 3'
1954	119717	21770	1.5	3.0E-47	AS027868.1	NT	Homo sapiens chromosome 21 segment HS21C084
3855	13796		4.86	3.0E-47	U03181.1	NT	Homo sapiens KIA0439 mRNA, partial cds
4265	14164	23941	0.97	3.0E-47	U03181.1	NT	Homo sapiens nuclear dual-specific phosphatase (SBBP1) mRNA, partial cds
5559	15571	25955	4.26	3.0E-47	AW409500.1	EST_HUMAN	Human T-cell receptor alpha-chain mRNA from JM cell line, complete cds
6559	15571	25957	4.26	3.0E-47	AW409500.1	EST_HUMAN	UHF580.2x1 NCI CGAP_C08 Homo sapiens cDNA clone IMAGE:365326 5'
5093	16568		1.89	3.0E-47	A022413.1	EST_HUMAN	UHF580.2x1 NCI CGAP_C08 Homo sapiens cDNA clone IMAGE:365326 5'
142	10116	19936	4.27	2.0E-47	480318	NT	gp4607.x1 Soares, NFL_T_GSG_31 Homo sapiens cDNA clone IMAGE:184376 3'
982	10876	20722	2.18	2.0E-47	AL163265.2	NT	Homo sapiens myosin phosphatase, target subunit 2 (MYPT2), mRNA
982	10876	20723	2.18	2.0E-47	AL163265.2	NT	Homo sapiens chromosome 21 segment HS21C089
1548	11483		1.18	2.0E-47	A069276.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C089
1576	11479	21336	1.22	2.0E-47	7692108	NT	Homo sapiens KIA04028 gene product (KIA04028), mRNA
2165	11557	21974	4.44	2.0E-47	AA524514.1	EST_HUMAN	ng43n12.x1 NCI CGAP_C03 Homo sapiens cDNA clone IMAGE:397607 3'
4251	14150	23924	1.65	2.0E-47	AF060506.1	NT	Homo sapiens promyelocytic leukemia zinc finger protein (PLZF), complete cds
4251	14150	23924	1.65	2.0E-47	4524866	NT	Homo sapiens ring finger protein (CB-1C4 type) B (RNF8), mRNA
4287	14166	23957	1.76	2.0E-47	AA569502.1	EST_HUMAN	nr23907.x1 NCI CGAP_P1 Homo sapiens cDNA clone IMAGE:914852
4287	14166	23957	1.76	2.0E-47	AA569502.1	EST_HUMAN	nr23907.x1 NCI CGAP_P1 Homo sapiens cDNA clone IMAGE:914852
4108	14300	24064	2.05	2.0E-47	9174648	NT	ES1377259 Homo sapiens RuvB-like activation domain binding protein-related (RAB-R) mRNA
4707	14593	24384	1.1	2.0E-47	AW1665166.1	EST_HUMAN	ES1377259 Homo sapiens RuvB-like activation domain binding protein-related (RAB-R) mRNA
5935	15549	26337	1.6	2.0E-47	BE179475.1	EST_HUMAN	601453932F1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:365748 5'
5935	15549	26338	1.6	2.0E-47	BE179475.1	EST_HUMAN	601453932F1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:365748 5'
6332	16454		1.39	2.0E-47	007391.1	NT	Homo sapiens 5-hydroxytryptamine 1D receptor pseudogene with an Alu repeat insertion
6943	15823	20716	2.1	2.0E-47	032675.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
6943	15823	20717	2.1	2.0E-47	032675.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
7060	16537	21727	1.71	2.0E-47	AF071771.1	NT	Homo sapiens SPH-binding factor mRNA, partial cds
9070	10116	19936	5.77	2.0E-47	480318	NT	Homo sapiens myosin phosphatase, target subunit 2 (MYPT2), mRNA



Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NC:	Exon SEQ ID NC:	ORF SEQ ID NC:	Expression Signal	Most Similar (Top) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9216	19656	24985	1.98	2.0E-47	R42423.1	EST_HUMAN	Y95083.s1 Sources Infant Brain INB Homo sapiens cDNA clone IMAGE:28966 3' similar to contains ORF repetitive element;
9257	19656		1.32	2.0E-47	AL03206.2	NT	Homo sapiens chromosome 21 segment HS21C009
1383	11288	21142	4.5	1.0E-47	A333026.1	EST_HUMAN	gp9803.x1 Sources_fetal_Lung_NHL19W Homo sapiens cDNA clone IMAGE:1931189 3'
3748	13862	23443	0.79	1.0E-47	BE260477.1	EST_HUMAN	601155321F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3138863 5'
3749	13862	23444	0.79	1.0E-47	BE260477.1	EST_HUMAN	601155321F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3138863 5'
5008	14982	24648	2.56	1.0E-47	AW819306.1	EST_HUMAN	RC3-570197:130400-017-H02 370197 Homo sapiens cDNA
							4194003.x1 Barbed actin HPLRB0 Homo sapiens cDNA clone IMAGE:2355568 3' similar to gp:M22985
6194	15954	25085	7.68	1.0E-47	A830865.1	EST_HUMAN	RAS-RELATED PROTEIN RAP-1A (HUMAN);
7028	17776	28017	1.75	1.0E-47	L30115.1	NT	Pazo hamsters alcohol dehydrogenase class 1 (ADH) gene, exon 7-4b, end partial cds, alternatively spliced
1590	11499	21358	2.34	9.0E-46	AF223391.1	NT	CM5ANT0100:310700-260-05 V70100 Homo sapiens cDNA
3009	13425	23228	0.83	9.0E-46	BF359847.1	EST_HUMAN	601310479F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3332083 5'
8460	18333	26693	3.22	9.0E-46	BE338313.1	EST_HUMAN	Homo sapiens aminocyclase 1 (ACY1) mRNA
1200	11138		1.32	9.0E-46	4501900	NT	Homo sapiens aminocyclase 1 (ACY1) mRNA
1231	11138		1.31	9.0E-46	4501900	NT	Homo sapiens aminocyclase 1 (ACY1) mRNA
3095	13023	22818	3.02	9.0E-46	AV769477.1	EST_HUMAN	h615033.x1 NCI CGAP_Lym12 Homo sapiens cDNA clone IMAGE:3001133 3' similar to gp:X64707
3096	13023	22819	3.02	9.0E-46	AV769477.1	EST_HUMAN	h615033.x1 NCI CGAP_Lym12 Homo sapiens cDNA clone IMAGE:3001133 3' similar to gp:X64707
482	10426		1.37	7.0E-46	AB033035.1	NT	h615033.x1 NCI CGAP_Lym12 Homo sapiens cDNA clone IMAGE:3001133 3' similar to gp:X64707
483	10426		1.37	7.0E-46	AB033035.1	NT	Homo sapiens mRNA for KIAA1260 protein, partial cds
1462	11387	21260	1.12	7.0E-46	8012719	NT	Homo sapiens toulou die kinase 1 (TLK1) mRNA
1020	11524	21582	3.49	7.0E-46	9730038	NT	Homo sapiens SET domain and methyl transferase fusion gene (SETMAR) mRNA
6647	18652	25975	22.88	7.0E-46	11410831	NT	Homo sapiens h6804-RNA synthetase (HARS) mRNA
7275	17162	27348	1.52	6.0E-46	AF029816.1	NT	Homo sapiens putative oncogene protein mRNA, partial cds
7500	17370	27977	1.9	6.0E-46	11427428	NT	Homo sapiens hypothetical protein FLJ11006 (FLJ11006) mRNA
							zq4505.s1 Straglene INT neuron (893723) Homo sapiens cDNA clone IMAGE:632627 3' similar to contains Alu repetitive element;
7697	17438	27954	3.36	6.0E-46	AA180060.1	EST_HUMAN	Homo sapiens phosphatidylserase 1A, calcium-dependent (PDE1A) mRNA
3206	15037	22989	1.39	5.0E-48	482809H	NT	h615033.x1 NCI CGAP_P28 Homo sapiens cDNA clone IMAGE:2254154 3'
8325	18022	28451	3.55	4.0E-48	A020420.1	EST_HUMAN	h615033.x1 NCI CGAP_P28 Homo sapiens cDNA clone IMAGE:2254154 3'
1303	11269	21124	0.92	3.0E-48	AV900964.1	EST_HUMAN	AV900964 GRK Homo sapiens cDNA clone GKCDRE12 5'
1833	11828	21710	18.97	3.0E-48	4885170	NT	Homo sapiens chromosome X open reading frame 6 (XORF6) mRNA
1533	11626	21711	18.97	3.0E-48	4885170	NT	Homo sapiens chromosome X open reading frame 6 (XORF6) mRNA

Table 4

## Single Exon Probes Expressed in Hsmt

Probe SEQ ID NO:	Exon SEQ ID NO:	CRF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3579	13453	23284	0.88	3.0E-48	AW064531.1	EST_HUMAN	H1412.1x1 NCL CGAP_011 Homo sapiens cDNA clone IMAGE:3082285 3' similar to SW-626_HUMAN
5592	15507	25582	2.35	3.0E-48	BE084571.1	EST_HUMAN	P66955 DOWN SYNDROME CRITICAL REGION PROTEIN B.1
6850	16766		2.86	3.0E-48	AA056930.1	EST_HUMAN	NR14370067-060400-207-110 BT0557 Homo sapiens cDNA
8248	18126	28970	7.08	3.0E-48	BF14170.1	EST_HUMAN	nr03063.1 NCL CGAP_P122 Homo sapiens cDNA clone IMAGE:1219137 3' similar to contains P1R6.D1
30	10027	19827	1.18	2.0E-48	AA031940.1	EST_HUMAN	P1R6.D1 repetitive element
4431	14326	24114	1.35	2.0E-48	BE240065.1	EST_HUMAN	TCBP1D3842 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HQSC project-TCBA Homo
5593	15466	25539	72.29	2.0E-48	AA013171.1	EST_HUMAN	sapiens cDNA clone TCBA9842
5593	15466	25540	72.29	2.0E-48	AA013171.1	EST_HUMAN	nr19901.1 NCL CGAP_P101 Homo sapiens cDNA clone IMAGE:1101072 3'
8440	16301	25464	4.29	2.0E-48	AB040934.1	NT	nr19901.1 NCL CGAP_P101 Homo sapiens cDNA clone IMAGE:1101072 3'
8440	16301	25464	4.29	2.0E-48	AB040934.1	NT	Homo sapiens mRNA for KIAA1501 protein, partial cds
6447	16308	25473	2.9	2.0E-48	11493238	NT	Homo sapiens v-ral avian retroviral oncogene homolog A (nuclear factor of kappa light
8694	16743	25530	2.39	2.0E-48	AV743451.1	EST_HUMAN	polydiploid gene enhancer in B-cells 3 (p65) (RELA) mRNA
9184	15382	24528	2.45	2.0E-48	AA459007.1	EST_HUMAN	AV743451 CB Homo sapiens cDNA clone QBCQCG10 5'
9511	16770	25700	1.63	2.0E-48	BE737154.1	EST_HUMAN	Z680593.1 Spontaneous over tumor NHR07 Homo sapiens cDNA clone IMAGE:810652 3'
50	10037	19844	0.85	1.0E-48	7706934	NT	901305084F NIH MGCC 30 Homo sapiens cDNA clone IMAGE:3833782 3'
							Homo sapiens capelin resistance-associated overexpressed protein (LOC51747), mRNA
855	10782	20832	6.93	1.0E-48	4552109	NT	Homo sapiens amyloid beta (A4) precursor protein (precursor protein) (APP), mRNA
1274	11182	21032	3.26	1.0E-48	803202	NT	Homo sapiens RNA binding motif protein 3 (RBM3), mRNA
1676	11772	21046	44.65	1.0E-48	AL163302.2	NT	Homo sapiens chromosome 21 segment HSC1C102
3443	13950	23167	1.22	1.0E-48	AL163246.2	NT	Homo sapiens chromosome 21 segment HSC1C106
5082	14552	24728	1.1	1.0E-48	M109763.1	NT	Homo endogenous retroviral DNA (4-1), complete retroviral segment
6363	16167	26225	2.21	1.0E-48	4759157	NT	Homo sapiens huntingtin (Huntington disease) (HD) mRNA
7337	17205	27004	5.72	1.0E-48	AB033071.1	NT	Homo sapiens huntingtin (Huntington disease) (HD) mRNA
7620	17377	27086	4.48	1.0E-48	F304863.1	EST_HUMAN	Homo sapiens mRNA for KIAA1245 protein, partial cds
7934	17784	28023	5.06	1.0E-48	11429308	NT	601888066F NIH MGCC 17 Homo sapiens cDNA clone IMAGE:4122116 5'
7934	17784	28024	5.06	1.0E-48	11429308	NT	Homo sapiens B cell linker protein (SLP65), mRNA
8050	18802	29094	1.73	1.0E-48	AF110117.1	NT	Homo sapiens B cell linker protein (SLP65), mRNA
8999	18802	29096	1.73	1.0E-48	AF110117.1	NT	Homo sapiens dopamine transporter (SLC6A3) gene, complete cds
9145	16903		1.56	1.0E-48	VJ20785.1	EST_HUMAN	Homo sapiens dopamine transporter (SLC6A3) gene, complete cds
5692	15901	25702	2.95	8.0E-49	10048417	NT	1548 Homo sapiens retina cDNA (randomly primed) auxiliary Homo sapiens cDNA
							Homo musculus T-box 20 (Tbx20), mRNA

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Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Meat Similar (Top) HR BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6692	16001	26703	2.96	8.0E-49	10048417	NT	Mus musculus T-box 20 (Tbx20), mRNA
6827	16706	26900	3.19	8.0E-49	U23850.1	NT	Human Involitin 1, 4.5 (disphosphatase receptor type 1) mRNA, partial cds
134	10336	20157	1.47	7.0E-49	5729690	NT	Human sapiens proteasome (prosome, macropain) 28S subunit, A1Pase, 4 (PSMOC4) mRNA
9820	18728	26022	1.47	7.0E-49	5729690	NT	Human sapiens proteasome (prosome, macropain) 28S subunit, A1Pase, 4 (PSMOC4) mRNA
388	10336	20156	1.74	7.0E-49	5729690	NT	Human sapiens proteasome (prosome, macropain) 28S subunit, A1Pase, 4 (PSMOC4) mRNA
388	10336	20156	1.74	7.0E-49	5729690	NT	Human sapiens proteasome (prosome, macropain) 28S subunit, A1Pase, 4 (PSMOC4) mRNA
389	10336	20157	1.96	7.0E-49	5729690	NT	Human sapiens proteasome (prosome, macropain) 28S subunit, A1Pase, 4 (PSMOC4) mRNA
389	10336	20156	1.96	7.0E-49	5729690	NT	Human sapiens proteasome (prosome, macropain) 28S subunit, A1Pase, 4 (PSMOC4) mRNA
1202	11112	20968	4.06	7.0E-49	AL163284.2	NT	Human sapiens chromosome 21 segment HS21C084
4650	14443	24227	0.96	7.0E-49	060811	SWISSPROT	w28004.x1 Sox9, NFI_L_1_OBQ_31 Homo sapiens cDNA clone IMAGE:2356969 3' similar to TR-054023
8351	15271	26100	1.93	7.0E-49	A4807191.1	EST_HUMAN	DKFZ762C033.3 s1 762 (synonym: hme2) Homo sapiens cDNA clone IMAGE:300954 3' similar to TR-054023
8357	16277	26107	1.34	7.0E-49	AL126937.1	EST_HUMAN	h55505.x1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:300954 3' similar to gb:U7209.405
160	10162	19570	11.77	8.0E-49	AY1731740.1	EST_HUMAN	RIBOSOMAL PROTEIN S4 (HUMAN), gp M20632 Mature L1 Repo protein mRNA from a repetitive element, complete MUSEI
8800	18407	26738	2.92	8.0E-49	XV142216.1	EST_HUMAN	(U1H818_3p-c55-CLU) L1 NC1 CGXP_Sub5 Homo sapiens cDNA clone IMAGE:3068048 3'
9820	18728	26022	2.86	5.0E-49	AA355565.1	EST_HUMAN	EST177535 Pancreas tumor III Homo sapiens cDNA 5' and
9820	18728	26023	2.86	5.0E-49	AA355565.1	EST_HUMAN	EST177535 Pancreas tumor III Homo sapiens cDNA 5' and
9907	19498	20452	3.43	6.0E-49	AA1707567.1	EST_HUMAN	225028.67 Soares, Jedd, liver, green, 1NFI.L3_51 Homo sapiens cDNA clone IMAGE:461694 3'
696	10628	20463	3.37	6.0E-49	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
696	10628	20463	3.37	6.0E-49	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
1763	11653	21624	1.94	5.0E-49	AA171211.1	EST_HUMAN	z62607.11 Stralagene neurospindium (8937231) Homo sapiens cDNA clone IMAGE:010890 5' similar to TR-0323226 G233226 RYU-H PROTEIN, contains LTR7.13 LTR7 LTR7 repetitive element :
2721	12583	22477	6.18	5.0E-49	U17174.1	NT	Homo sapiens putative tumor suppressor ST13 (ST13) mRNA, complete cds
3236	13159	22967	6.13	6.0E-49	11438395	NT	Homo sapiens similar to ribosomal protein S27 (methyltransferase 1) (H. sapiens) (LOC39392), mRNA
814	10466	20266	37.46	4.0E-49	AW189633.1	EST_HUMAN	X6801.x1 NC1 CGALP_114 Homo sapiens cDNA clone IMAGE:267590 3' similar to WP-50380.2B
9376	19710		2.43	4.0E-49	AA210766.1	EST_HUMAN	z60605.r1 NC1 CGALP_114 Homo sapiens cDNA clone IMAGE:267590 3' similar to WP-50380.2B
9456	19050		3.3	4.0E-49	AF240786.1	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds
548	10489	20296	0.93	3.0E-49	X86608.1	NT	H. sapiens mRNA for acetyl-CoA carboxylase

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Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORE SEQ ID NO:	Expression Signal	Most Similar BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2611	12479	24564	2.01	3.0E-46	AA016131.1	EST_HUMAN	zsf1 c05.11 Soares retina N26-4f-IR Homo sapiens cDNA clone IMAGE:360684 5' similar to contains L1.18 L1 repetitive element;
4600	14788	24564	2.08	3.0E-46	U46698.1	NT	Human type IV collagen (COL4A6) gene, exon 40
6360	16248	25400	9.6	3.0E-46	H80479.1	EST_HUMAN	EST125612.2 WATMT Homo sapiens cDNA clone 25e12
8621	18487	28750	2.3	3.0E-49	AA337561.1	EST_HUMAN	EST12572 Endometrial tumor Homo sapiens cDNA 5' end
648	10562	266	2.66	2.0E-49	BE105860.1	EST_HUMAN	MR3-HT0487-110200-115-p01 HT0487 Homo sapiens cDNA
3185	13110	22914	1.4	2.0E-46	N24466.1	EST_HUMAN	W23206.11 Soares melanocyte 2bSHM Homo sapiens cDNA clone IMAGE:262571 5'
3521	13437	23235	0.93	2.0E-46	AF026564.1	NT	Homo sapiens RNA binding protein II (RBM11) gene, complete cds
4693	14579	24373	1.12	2.0E-46	A107357.1	EST_HUMAN	gp18402.11 Soares, sequester, fibroblasts, NIH3T3 Homo sapiens cDNA clone IMAGE:1962403 3' similar to gp18402.11
4704	14560	24381	1.26	2.0E-46	BE511846.1	EST_HUMAN	gp184170 Ras-Like PROTEIN TC10 (HUMAN); contains Alu repetitive element; contains element MER22
5040	15943	26775	1.47	2.0E-46	AY177838.1	EST_HUMAN	UHL1504-aps-d-02-011 at NCI, CGAP, Sub38 Homo sapiens cDNA clone IMAGE:3068538 3'
6711	16571	26775	1.87	2.0E-46	AY177838.1	EST_HUMAN	AY177838 D2B Homo sapiens cDNA clone DGBALB01 5'
9487	19560	26775	1.83	2.0E-46	AF103554.1	NT	EST12559 Fetal brain, Singapore (cath926206) Homo sapiens cDNA clone HFB0750
881	10807	21531	3.95	1.0E-49	BF103554.1	EST_HUMAN	Homo sapiens SNCA isoform (SNCA) gene, complete cds, alternatively spliced
1760	11959	21531	2.98	1.0E-49	BE259278.1	EST_HUMAN	601158831FT NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3352036 5'
5289	13210	25011	4.97	1.0E-49	BF131007.1	EST_HUMAN	601157695F NIH_MGC_18 Homo sapiens cDNA clone IMAGE:3352036 5'
6287	16151	26307	2.63	1.0E-46	BE098110.1	EST_HUMAN	601200330FT NIH_MGC_38 Homo sapiens cDNA clone IMAGE:3520652 5'
6287	16151	26308	2.63	1.0E-46	BE098110.1	EST_HUMAN	601200330FT NIH_MGC_38 Homo sapiens cDNA clone IMAGE:3520652 5'
6322	16185	26346	2.17	1.0E-46	N25884.1	EST_HUMAN	W79g12.41 Soares, placenta, 3d9weeks, 2bSHM555W Homo sapiens cDNA clone IMAGE:256406 3' similar to gp105873
6322	16185	26347	2.17	1.0E-46	N25884.1	EST_HUMAN	W79g12.41 Soares, placenta, 3d9weeks, 2bSHM555W Homo sapiens cDNA clone IMAGE:256406 3' similar to gp105873
6700	16589	26778	1.29	1.0E-49	11321590	NT	W79g12.41 Soares, placenta, 3d9weeks, 2bSHM555W Homo sapiens cDNA clone IMAGE:256406 3' similar to gp105873
6700	16589	26778	1.29	1.0E-49	11321590	NT	Homo sapiens succinate-CoA lyase, GDP-forming, alpha subunit (SUCLG1), mRNA
7200	17077	27262	1.21	1.0E-49	BE400340.1	EST_HUMAN	Homo sapiens succinate-CoA lyase, GDP-forming, alpha subunit (SUCLG1), mRNA
7830	17680	27924	1.22	1.0E-49	AL034129.2	EST_HUMAN	601300692F NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3383598 5'
8030	18495	28769	3.88	1.0E-49	11427300	NT	DKFZP434D2423.1 B34 (synonym: hla33) Homo sapiens cDNA clone DKFZP434D2423 5'
9018	18813	28769	1.73	1.0E-49	BE159343.1	EST_HUMAN	Homo sapiens brefeldin A-inhibited guanine nucleotide-exchange protein 1 (BICcr1), mRNA
9367	19335	28769	2	1.0E-49	11418322	NT	MRO-HT0407-010200-006-02 HT0407 1 homo sapiens cDNA
4823	14802	19951	1.06	6.0E-50	AF101476.1	NT	Homo sapiens cytochrome P-450 2C19 (CYP2C19), mRNA
183	10136	19951	2.59	8.0E-50	AL163202.2	NT	Homo sapiens glycylglycyl-N-methyltransferase (GNMT) gene, complete cds
702	10353	20460	1.86	8.0E-50	N85907.2	NT	Homo sapiens chromosome 21 segment HS21C002
							Homo sapiens mRNA for VIP receptor 2

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Table 4

### Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source
702	10635	20461	1.80	8.0E-50	X93097.2	NT
1016	10934	.	1.21	8.0E-50	AFO005673.1	NT
11727	11626	21147	2.51	8.0E-50	4501600	NT
2432	12309	22204	1.36	8.0E-50	7709354	NT
2432	12306	22205	1.36	8.0E-50	7709354	NT
2686	12831	22421	1.50	8.0E-50	4826568	NT
8711	18826	26811	2.1	8.0E-50	AAG33467.1	EST_HUMAN
503	10350	20349	0.96	7.0E-50	BEO0590.1	EST_HUMAN
8198	18027	26733	9.52	7.0E-50	AJ27137.1	EST_HUMAN
6781	16860	.	4.47	6.0E-50	BE044076.1	EST_HUMAN
8190	18076	26326	3.17	6.0E-50	AA8312076.1	EST_HUMAN
8190	18076	26327	3.17	6.0E-50	AA8312076.1	EST_HUMAN
1762	11052	21522	0.86	5.0E-50	BF333381.1	EST_HUMAN
1752	11652	21523	0.95	5.0E-50	BF333381.1	EST_HUMAN
7255	17132	.	5.64	5.0E-50	AA657683.1	EST_HUMAN
8891	18765	20086	1.95	5.0E-50	AA403053.1	EST_HUMAN
850	10824	.	1.28	4.0E-50	AA607148.1	EST_HUMAN
1808	11793	.	2.45	3.0E-50	M15048.1	NT
3258	17312	22981	1.14	3.0E-50	AA74162.1	EST_HUMAN
3692	13606	23892	4.9	3.0E-50	AW76254.1	EST_HUMAN
6095	16039	26180	1.65	3.0E-50	11421514	NT
6505	16364	26540	4.01	3.0E-50	AF233490.2	NT
6505	16364	26541	4.01	3.0E-50	AF233490.2	NT
7049	17499	27721	1.17	3.0E-50	AB048818.1	NT
8760	17069	28163	5.94	3.0E-50	AJ24562.1	NT
Top Hit Descriptor						
Homo sapiens mRNA for VIP receptor 2						
Homo sapiens homotipicase 1,2-dicyclopentane gene, complete cds						
Homo sapiens actinin, alpha 1 (ACTN1) mRNA						
Homo sapiens p47 (LOC51674).mRNA						
Homo sapiens p47 (LOC51674).mRNA						
Homo sapiens sappling protein (actin filament) muscle Z-line, testis (CAPZB), mRNA						
ncfG3A06.5x1 NCQ CGAP B2 Homo sapiens cDNA clone IMAGE:1130897 3' similar to glrJ05459						
GLUTATHIONE S-TRANSFERASE TESTIS-BRAIN (HUMAN);						
U01570765:289400-241+508 B10703 c-myc splicing cDNA						
hm55511.x1 NCQ CGAP U02 Homo sapiens cDNA clone IMAGE:2435008 3'						
bc398104.x1 NCQ CGAP U11 Homo sapiens cDNA clone IMAGE:3039811 3' similar to contains MER29 b3						
MER29 repetitive element;						
EST1162775 Junkat T1-588 VtHomo sapiens cDNA 5' end						
EST1162775 Junkat T1-cells VtHomo sapiens cDNA 5' end						
CM0010792:300600-398+505 B10762 Homo sapiens cDNA						
CM010792:300600-398+505 B10762 Homo sapiens cDNA						
n48101.x1 NCQ CGAP P44 Homo sapiens cDNA clone IMAGE:1049883 similar to contains PR58.b.PTR58						
repetitive element ;						
265201.7 Scores, Insulin, NHT Homo sapiens cDNA clone IMAGE:29689 5' similar to TR-G1338769						
G1335769 GAC POL-POLYPROTEIN ;						
ncfH409.9x1 NCQ CGAP SS1 Homo sapiens cDNA clone IMAGE:1104620 3' similar to glrX63741.Lma1						
FEULIN-1, ISOFORM A PRECURSOR (HUMAN);						
Human endogenous retrovirus RTVL-H2						
cd30309.x1 NCQ CGAP 1648 Homo sapiens cDNA clone IMAGE:1325267 3'						
CDVY45 Homo sapiens cardiac muscle expression library/Homo sapiens cDNA clone 4151935 similar to CMV45						
Cardiac myopathy associated gene 5						
Homo sapiens similar to Santa domain, immunoglobulin domain (fb), short basic domain, secreted, (semaphorin) 5A (H. sapiens) (LOC52322). mRNA						
Homo sapiens FYVE domain-containing dual specificity protein phosphatase FYVE-OSF1a mRNA, complete cds						
Homo sapiens FYVE domain-containing dual specificity protein phosphatase FYVE-OSF1a mRNA, complete cds						
Homo sapiens CTL2 gene						

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
761	10691		4.91	2.0E-50	AF450566.1	NT	Homo sapiens MHC class 1 region
1063	10679	20623	4.6	2.0E-50	4507792	NT	Homo sapiens midline 1 (OpticEED syndrome) (MID1) mRNA
1425	11330	21197	18.02	2.0E-50	AF138033.1	NT	Homo sapiens decorin DnRNA, complete cds, alternatively spliced
6624	16802	26956	6.27	2.0E-50	X06668.1	NT	Human HALPHA44 gene for alpha-tubulin, exons 1-3
6524	16802	26956	6.27	2.0E-50	X06668.1	NT	Human HALPHA44 gene for alpha-tubulin, exons 1-3
7686	17636	27761	1.63	2.0E-50	9910233	NT	Mus musculus keratin complex 2, gene 6g (Krt2-6g), mRNA
7686	17636	27762	1.63	2.0E-50	9910233	NT	Mus musculus keratin complex 2, gene 6g (Krt2-6g), mRNA
235	10204	20019	1	1.0E-50	BE007080.1	EST_HUMAN	PM3-BNO137-200300-002-g11 BNO137 Homo sapiens cDNA
235	10204	20019	1	1.0E-50	BE007080.1	EST_HUMAN	PM3-BNO137-200300-002-g11 BNO137 Homo sapiens cDNA
464	10568	20219	2.1	1.0E-50	AL163200.2	NT	Homo sapiens chromosome 21 segment HS21C009
2314	12165		8.68	1.0E-50	AI271735.1	NT	Homo sapiens Xq pseudautosomal region, segment 1/2
7375	17244	27460	1.22	6.0E-51	AA494738.1	EST_HUMAN	nc8466.g1 NCI C3AP, pregnant, uterus, fibroblast Homo sapiens cDNA clone IMAGE480352 5'
4467	1361	24151	4.89	8.0E-51	AA010942.1	EST_HUMAN	HETEROGENEOUS NUCLEAR RIBONUCLEOPROTEIN A1 (HUMAN);
6510	16369	26546	2.34	8.0E-51	11439387	EST_HUMAN	HOMOGENEOUS NUCLEAR RIBONUCLEOPROTEIN A1 (HUMAN);
7148	17267		1.28	8.0E-51	AI138603.1	EST_HUMAN	HOMOGENEOUS NUCLEAR RIBONUCLEOPROTEIN A1 (HUMAN);
3245	15166	22867	1.36	7.0E-51	AV188273.1	EST_HUMAN	Q1Y138550.P1 ACE1 Homo sapiens cDNA clone PLACE109887 5'
3317	15288	23642	0.83	7.0E-51	AV274730.1	EST_HUMAN	Q1Y138550.P1 ACE1 Homo sapiens cDNA clone PLACE109887 5'
4076	13878	23757	1.26	7.0E-51	AL076268.1	EST_HUMAN	Q1Y138550.P1 ACE1 Homo sapiens cDNA clone PLACE109887 5'
4076	13878	23758	1.26	7.0E-51	AL076268.1	EST_HUMAN	Q1Y138550.P1 ACE1 Homo sapiens cDNA clone PLACE109887 5'
4264	14103	23627	2.38	7.0E-51	AV296003.1	EST_HUMAN	Q1Y138550.P1 ACE1 Homo sapiens cDNA clone PLACE109887 5'
1636	11831	27114	6.3	6.0E-51	7687206	NT	Homo sapiens KIAA0029 protein Mus2 Interacting nuclear target (MINT) homolog (KIAA0029), mRNA
3428	13345	23150	12.92	6.0E-51	7687206	NT	Homo sapiens KIAA0029 protein Mus2 Interacting nuclear target (MINT) homolog (KIAA0029), mRNA
4212	14110	23887	0.78	6.0E-51	9910653	NT	Homo sapiens soluble carrier family 2 (facilitated glucose transporter), member 9 (SLC2A9), mRNA
4212	14110	23888	0.78	6.0E-51	9910653	NT	Homo sapiens soluble carrier family 2 (facilitated glucose transporter), member 9 (SLC2A9), mRNA
6545	16558	25687	2.26	6.0E-51	X07788.1	NT	Human histogonin related (Hpr) gene exon 3
6550	15952	25656	0.68	6.0E-51	AF070063.1	NT	Homo sapiens mitogen-activated protein kinase kinase 1 (MKK4) gene, exon 4
6550	15952	25657	0.68	6.0E-51	AF070063.1	NT	Homo sapiens mitogen-activated protein kinase kinase 1 (MKK4) gene, exon 4
6158	15116	24450	2.16	6.0E-51	11429095	NT	Homo sapiens cell adhesion molecule (LOC51148), mRNA
7583	17434	27649	2.26	6.0E-51	7681535	NT	Homo sapiens B9 protein (B9), mRNA
8390	18448	28716	1.72	6.0E-51	11526286	NT	Homo sapiens interleukin 17 receptor (IL17R), mRNA

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Table 4

Single Exon Probes Expressed in Test

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
774	10704	20549	10.92	5.0E-51	AL163203.2	NT	Homo sapiens chromosome 21 segment HS21003
786	10719	20557	1.47	5.0E-51	4607500	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TAM1) mRNA
795	12982	20745	1.37	5.0E-51	AL133204.1	NT	Novel human gene mapping to chromosome X
1800	11484	21354	0.84	5.0E-51	5031080	NT	Homo sapiens 26S proteasome-associated part homolog (POH1) mRNA
2648	12422	22311	11.48	5.0E-51	AJ007558.1	NT	Homo sapiens mRNA for nucleoporin 155
3863	13774	23566	1.08	5.0E-51	M306938.1	NT	Human Ku (p70)80 subunit mRNA, complete cds
3863	13774	23567	1.08	5.0E-51	M306938.1	NT	Human Ku (p70)80 subunit mRNA, complete cds
5004	14876	24543	2.34	5.0E-51	AB037522.1	NT	Homo sapiens mRNA for KIAA1411 protein, partial cds
8601	18096	26739	3.72	5.0E-51	5803138	NT	Homo sapiens RNA binding motif protein 3 (RBM3) mRNA
130	10104	19026	0.92	3.0E-51	A1927348.1	EST_HUMAN	1681006.x1 NCL CGAP_Pant Homo sapiens cDNA clone IMAGE:224720 3' similar to gb:M26326
1150	11072	20517	4.16	3.0E-51	A597348.1	EST_HUMAN	1681006.x1 NCL CGAP_Pant Homo sapiens cDNA clone IMAGE:224720 3' similar to gb:M26326
4232	14130	23306	2.13	3.0E-51	AL159142.1	NT	Novel human gene mapping to chromosome 22
8474	46333	26500	1.79	3.0E-51	R15014.1	EST_HUMAN	1947008.1 Source infant brain 1 NB Homo sapiens cDNA clone IMAGE:59233 5' similar to gb:M14123_c064
7131	17008		5.87	3.0E-51	M23033.1	NT	RETROVIRUS-RELATED POL. POLYPROTEIN (HUMAN); contains LTRs repetitive element.
8075	16233		1.58	3.0E-51	AF003526.1	NT	Human hspRN C2 protein mRNA
302	10718	20130	1.81	2.0E-51	4507798	NT	Homo sapiens X-linked arylsulphatase protein gene (EDA), exon 2 and flanking repeat regions
673	10607	20424	1.08	2.0E-51	BE391063.1	EST_HUMAN	Homo sapiens ubiquitin protein ligase E3A (human papilloma virus E6-associated protein, ArfG13h1) (UBE3A) mRNA
673	10607	20424	1.08	2.0E-51	BE391063.1	EST_HUMAN	60126594.F1 NH MGCC 24 Homo sapiens cDNA clone IMAGE:3507463 5'
1862	11664	21431	2.24	2.0E-51	AA233352.1	EST_HUMAN	60126594.F1 NH MGCC 24 Homo sapiens cDNA clone IMAGE:3507463 5'
3672	13360	23373	2.21	2.0E-51	A1492415.1	EST_HUMAN	to TR-C233226 C233226 RYV-LH PROTEIN, contains LTR 8 LTR repetitive element;
4302	14288	24071	1.02	2.0E-51	AW137826.1	EST_HUMAN	to TR-C233226 C233226 RYV-LH PROTEIN, contains LTR 8 LTR repetitive element;
5662	15573	25970	2.86	2.0E-51	BE193015.1	EST_HUMAN	to TR-C233226 C233226 RYV-LH PROTEIN, contains LTR 8 LTR repetitive element;
7047	16624	27114	1.81	2.0E-51	BE01094.1	EST_HUMAN	to TR-C233226 C233226 RYV-LH PROTEIN, contains LTR 8 LTR repetitive element;
7047	16624	27115	1.81	2.0E-51	BE01094.1	EST_HUMAN	to TR-C233226 C233226 RYV-LH PROTEIN, contains LTR 8 LTR repetitive element;
7478	17548	27652	1.88	2.0E-51	AB17078.1	EST_HUMAN	to TR-C233226 C233226 RYV-LH PROTEIN, contains LTR 8 LTR repetitive element;
7593	17390	27390	5.25	2.0E-51	BE165950.1	EST_HUMAN	to TR-C233226 C233226 RYV-LH PROTEIN, contains LTR 8 LTR repetitive element;

Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7902	17612	28054	1.71	2.0E-51	AV682474.1	EST_HUMAN	AV682474 GKB Homo sapiens cDNA clone GKBAG95 5'
8940	15259	25084	8.03	2.0E-51	A722851.1	EST_HUMAN	d34060.s1 NCI CGAP_K06 Homo sapiens cDNA clone IMAGE:132600 3' similar to SW:NM1_MOUSE P35438 GLUTAMATE [NM2A] RECEPTOR SUBUNIT EPSILON 1 PRECURSOR :
8940	15259	25085	8.03	2.0E-51	A722851.1	EST_HUMAN	d34060.s1 NCI CGAP_K06 Homo sapiens cDNA clone IMAGE:132600 3' similar to SW:NM1_MOUSE P35438 GLUTAMATE [NM2A] RECEPTOR SUBUNIT EPSILON 1 PRECURSOR :
8968	10227	25240	1.33	2.0E-51	11419159	NT	Homo sapiens myeloid/lymphoid or mixed-lineage leukemia (t(11q24) [chromosome]; translocated to, 4 (MLL1), mRNA
1091	10090	18905	4.41	1.0E-51	4503526	NT	Homo sapiens eukaryotic translation initiation factor 4A, isoform 1 (EIF4A1) mRNA
1476	11383	22869	22.7	1.0E-51	A742248.1	EST_HUMAN	A742248 CB Homo sapiens cDNA clone CSF0C12 5'
4309	14203	23660	0.60	1.0E-51	4750071	NT	Homo sapiens small inducible cytokine subfamily A (Cys-Cys), member 15 (SCYA15) mRNA
4309	14203	23660	0.60	1.0E-51	4750071	NT	Homo sapiens small inducible cytokine subfamily A (Cys-Cys), member 15 (SCYA15) mRNA
5310	15231	25036	3.12	1.0E-51	118862.1	EST_HUMAN	bt20581 Testis 1 Homo sapiens cDNA clone b12058
8680	19771		3.57	1.0E-51	AV769560.1	EST_HUMAN	AV769560 MDS Homo sapiens cDNA clone MDSB02 5'
9454	19086		3.28	8.0E-52	A477821.1	EST_HUMAN	585407 rat Sarcosine fed liver spleen, INFES_S1 Homo sapiens cDNA clone IMAGE:446800 3' similar to contains THR13 THR repetitive element:
1461	11355	21246	1.33	8.0E-52	X8460.1	NT	Human mRNA for laminin-5, alpha3b chain
1633	11837	21397	2.06	8.0E-52	11668028	NT	Homo sapiens hypothetical protein FLJ13355 similar to N-myc downstream regulated 3 (FLJ13355), mRNA
1633	11837	21398	2.06	8.0E-52	11668028	NT	Homo sapiens hypothetical protein FLJ13355 similar to N-myc downstream regulated 3 (FLJ13355), mRNA
3973	11637	21397	6.44	8.0E-52	11668029	NT	Homo sapiens hypothetical protein FLJ13355 similar to N-myc downstream regulated 3 (FLJ13355), mRNA
3973	11637	21398	6.44	8.0E-52	11668028	NT	Homo sapiens hypothetical protein FLJ13355 similar to N-myc downstream regulated 3 (FLJ13355), mRNA
7211	17068	27278	1.48	7.0E-52	N56471.1	EST_HUMAN	2559040.t1 Soares parathyroid tumor NHPPA Homo sapiens cDNA clone IMAGE:329578 5' similar to contains AU repetitive element:
1170	11082		0.86	6.0E-52	BC072406.1	EST_HUMAN	QV3-BT0837-271239-045-007 BT0837 Homo sapiens cDNA
1008	11970	21430	2.25	6.0E-52	AF06907.1	NT	Homo sapiens S164 gene, partial cds; PST and hypothetical protein genes, complete cds, and S171 gene, partial cds
8540	18412	28678	2.23	6.0E-52	BC048172.1	EST_HUMAN	tr4904.s1 NCI CGAP_Bm02 Homo sapiens cDNA clone IMAGE:2291971 5' similar to SW:POBM_MOUSE_Q05763 BASEMENT MEMBRANE-SPECIFIC HEPARAN SULFATE PROTEOGLYCAN CORE PROTEIN PRECURSOR :



Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4340	14237	24021	2.07	5.0E-52	Z75988.1	NT	H.sapiens flow-sorted chromosome 6 HindIII fragment, S06A1817
1039	11543	21402	0.93	4.0E-52	AF257318.1	NT	Human sapiens SH3-containing protein SH3GLT1 mRNA, complete cds
1748	11648	21519	8.98	4.0E-52	4758843	NT	Human sapiens nucleoprotein 1550 (NUP155) mRNA
3850	13761	23554	0.82	4.0E-52	4507500	NT	Human sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1) mRNA
6986	16656	26760	1.24	4.0E-52	BC622032.1	EST_HUMAN	G0140687F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3916936 6'
6995	16943	27035	7.25	4.0E-52	11417035	NT	Human sapiens hystoxystered (17-beta) dehydrogenase 4 (HSD17B4), mRNA
5291	18952		4.25	4.0E-52	11418177	NT	Human sapiens Ran GTPase activating protein 1 (RANGAP1), mRNA
9778	19283		5.09	4.0E-52	AB002056.1	NT	Human sapiens DNA for Human P2X4, complete cds
4002	13063	20290	0.98	3.0E-52	11437042	NT	Human sapiens hypochlorite protein FLJ10975 (FLJ10675), mRNA
550	10461	20290	1.30	2.0E-52	V10976.1	NT	Human endogenous retroviral DNA (4-1), complete retroviral segment
550	10481	20500	1.39	2.0E-52	110976.1	NT	Human endogenous retroviral DNA (4-1), complete retroviral segment
2450	12237	22226	1.75	2.0E-52	BC207575.1	EST_HUMAN	Hs6807.x1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3030421 5' similar to gp-X16483 M muscle
2708	12559		20.63	2.0E-52	BC207782.1	EST_HUMAN	mRNA for Zfx-1, zinc finger protein (MOLISE)
4622	14732	24657	2.74	2.0E-52	AL137188.3	NT	G02094710F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4249851 5'
5497	15410	25479	2.74	2.0E-52	AY143041.1	EST_HUMAN	Novel human gene map0090 to chromosome 20, similar to membrane transcripts
5841	15747	25960	1.49	2.0E-52	11141808	NT	IL3-CT10214.231255-038-E12 CT10214 Homo sapiens cDNA
7028	16805		8.39	2.0E-52	AF147860.1	NT	Human sapiens Interleukin 21 receptor (IL21R), mRNA
						NT	Musca domestica beta-tubulin mRNA, complete cds
7468	17287		1.98	2.0E-52	4759789	NT	Human sapiens NADH dehydrogenase (ubiquinone) Fe-S protein 5 (15S) (NADH-coenzyme Q reductase) (NDUFS5) mRNA
7625	17675	27018	4.53	2.0E-52	5750038	NT	Human sapiens SET domain and nuclear transposase fusion gene (SETMAR) mRNA
7625	17675	27019	4.53	2.0E-52	5750038	NT	Human sapiens SET domain and nuclear transposase fusion gene (SETMAR) mRNA
8530	18408	28871	5.33	2.0E-52	A831482.1	EST_HUMAN	W446d4.x1 NCI_CGAP_L1019 Homo sapiens cDNA clone IMAGE:2406160 3' similar to contains THR.b2 THR repetitive element;
8536	18408	28872	5.33	2.0E-52	A831482.1	EST_HUMAN	W446d4.x1 NCI_CGAP_L1019 Homo sapiens cDNA clone IMAGE:2406150 3' similar to contains THR.b2 THR repetitive element;
8547	18419	28880	3.09	2.0E-52	AV175377.1	EST_HUMAN	W44915377 DOB Homo sapiens cDNA clone DOBAIE03 5'
8550	18548		2.08	2.0E-52	W10280.1	EST_HUMAN	z449g12.1 Soares_fetal_hear_NbH19W Homo sapiens cDNA clone IMAGE:344088 6'
8891	18701		3.22	2.0E-52	11417990	NT	Human sapiens LIM domain kinase 2 (LMK2), mRNA
9101	19155	24854	8.80	2.0E-52	AW23297.1	EST_HUMAN	xm72a07.x1 NCI_CGAP_CML1 Homo sapiens cDNA clone IMAGE:2700036 3' similar to contains Alu repetitive element; contains element LTR2 repetitive element;
9406	19112		4.26	2.0E-52	AB08895.1	EST_HUMAN	w67405.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2390549 3' similar to TRC10959
522	10464	20276	1.37	1.0E-52	AA834445.1	EST_HUMAN	Q18569 CARBOXYL ESTERASE;
						EST_HUMAN	z475h12.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:43979 3'

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Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (100) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1349	11265	21111	8.25	1.0E-52	4594/238	NT	Homo sapiens glutamate-oxaloacetate transaminase (glutamate synthase) (GLUT) mRNA
2488	12364		1.2	1.0E-52	4502238	NT	Homo sapiens acylsulfolipase D (ASD), transcript variant 1, mRNA
3021	12646	22741	1.41	1.0E-52	S51070.1	NT	polysome translocation homolog (retroviral element) [human, endogenous retroviral element RTV1-Hp], Genomic, 600 nt
3020	15102	24697	3.59	1.0E-52	U61070.1	NT	Human P-glycoprotein (MDR1) gene, exon 4
5561	15757	25675	2.11	1.0E-52	U39044.1	NT	Human PMS2 related (HPMSR2) gene, complete cds
6364	16255	26417	3.19	1.0E-52	U07262.1	NT	Human aldolase C gene for fructose-1,6-bisphosphate aldolase
6532	16510		1.54	1.0E-52	AL163227.2	NT	Homo sapiens chromosome 21 segment HS21C022
9023	17573		1.51	1.0E-53	AL163202.2	NT	Homo sapiens chromosome 21 segment HS21C022
8147	18035	28283	1.84	1.0E-52	U42953.1	NT	Homo sapiens protein tyrosine phosphatase FIPCAAX1 (pTTPCAAX1) mRNA, complete cds
8210	18094		2.04	1.0E-52	11428321	NT	Homo sapiens proteinase (protease, macropain) subunit, beta type 2 (PSMB2) mRNA
3723	18635	23420	1.03	9.0E-53	4505094	NT	Homo sapiens protein kinase cAMP-dependent regulatory, beta II, beta (PRKAR2B) mRNA
4293	14191	23975	1.01	9.0E-53	AF001448.1	NT	Homo sapiens core binding factor alpha1 subunit (CBFA1) gene, exon 3
4956	14841	24611	0.93	9.0E-53	7691713	NT	Homo sapiens proline carboxylase protein (CSF3B), mRNA
9335	19018		2.06	7.0E-53	BF338405.1	EST_HUMAN	S51047.7 HT NIH_MGC, 34 Homo sapiens cDNA clone IMAGE:2089077 5'
6762	19832		2.98	7.0E-53	AA421782.1	EST_HUMAN	944047.X1 NCI_GDAP_Bri23 Homo sapiens cDNA clone IMAGE:2089077 5' similar to contains THR.11 THR repetitive element;
4005	19815	23690	2.2	5.0E-53	4756543	EST_HUMAN	Homo sapiens heterogeneous nuclear ribonucleoprotein C (C102) (HNRP0) mRNA
6386	19048		1.72	5.0E-53	AW183563.1	EST_HUMAN	RC3-STO197.1 S1065-011-g10 ST10167 Homo sapiens cDNA
43	10031	19834	1.92	4.0E-53	AL163285.2	NT	Homo sapiens chromosome 21 segment HS21C085
43	10031	19835	1.92	4.0E-53	AL163285.2	NT	Homo sapiens chromosome 21 segment HS21C085
4715	14801	24357	1.06	4.0E-53	7705414	NT	Homo sapiens hook protein (HOOK), mRNA
8545	18417	28685	3.33	4.0E-53	BF128701.1	EST_HUMAN	60181069HT NIH_MGC, 48 Homo sapiens cDNA clone IMAGE:4059977 5'
8545	18417	28685	3.33	4.0E-53	BF128701.1	EST_HUMAN	60181069HT NIH_MGC, 48 Homo sapiens cDNA clone IMAGE:4059977 5'
8545	18417	28685	3.33	4.0E-53	BF128701.1	EST_HUMAN	60181069HT NIH_MGC, 48 Homo sapiens cDNA clone IMAGE:4059977 5'
2025	12493	22384	2.59	3.0E-53	AB028598.1	NT	Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 112 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
3970	13594	23371	1.29	3.0E-53	AW050356.1	EST_HUMAN	wz2/207.X1 Scores: Descrignafic, codon, NHCD Homo sapiens cDNA clone IMAGE:2565793 3'
4465	14380	24167	1.19	3.0E-53	AW1803563.1	EST_HUMAN	L2JUM0081-240300-055-D03 UMC081 Homo sapiens cDNA
4933	14715	24498	0.83	3.0E-53	BE089344.1	EST_HUMAN	Q1G-BT0381-270100-073-003 BT0381 Homo sapiens cDNA
6933	16712	25005	0.88	3.0E-53	BF12703.1	NT	SVF-growth inhibitory factor [human, brain, Genomic, 2015 nt]
7238	17115		8.59	3.0E-53	6501983	NT	Homo sapiens FGH1 oncogene primer (F-OPT) mRNA
450	10394		4.25	2.0E-53	AA369558.1	EST_HUMAN	ES1177525 Pancreas tumor III Homo sapiens cDNA 5' end
2279	12183	22990	2.98	2.0E-53	U78027.1	NT	Homo sapiens Bruton's tyrosine kinase (BTK), alpha-2-galactosidase A (GLA), L44-like ribosomal protein (L44L) and FTF3 (FTF3) genes, complete cds

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Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2460	12666		10.54	2.0E-43	4502316	NT	Homo sapiens ATPase, H <sup>+</sup> transporting, lysosomal (vacuolar proton pump) 31ND; Vacuolar proton-ATPase, subunit E; V-ATPase, subunit E (ATP6E), mRNA
2684	12669	22446	6.93	2.0E-43	4757915	NT	Homo sapiens core-binding factor, runt domain, alpha subunit 2; translocated to, 1; cyclin D-related (CBFA2T1) mRNA
2684	12669	22447	6.93	2.0E-43	4757915	NT	Homo sapiens core-binding factor, runt domain, alpha subunit 2; translocated to, 1; cyclin D-related (CBFA2T1) mRNA
3207	13131	22953	1.16	2.0E-43	AF03822.1	NT	Homo sapiens dihydropyrimidine receptor alpha 2 subunit (CA2NA2) gene, exon 6
3370	13877	23653	2.06	2.0E-43	U61873.1	NT	Human Kruppel-related DNA-binding protein (TF34) gene, partial cds
4390	14286	24068	1.07	2.0E-43	4506922	NT	Homo sapiens SKAP-55 homologue (SKAP-HOU) mRNA
5091	14861	24736	1.12	2.0E-43	AL163281.2	NT	Homo sapiens chromosome 21 segment HS21C081
5091	14861	24736	1.12	2.0E-43	AL163281.2	NT	Homo sapiens chromosome 21 segment HS21C081
5331	16251	26566	3.11	2.0E-43	BF334740.1	EST_HUMAN	PM1-CT0396-170600-001-p03 CT0396 Homo sapiens cDNA
5331	16251	26567	3.11	2.0E-43	BF334740.1	EST_HUMAN	PM1-CT0396-170600-001-p03 CT0396 Homo sapiens cDNA
7413	17360		5.6	2.0E-43	AY24676.1	EST_HUMAN	282265, primate NIH_MGC_7 Homo sapiens cDNA clone IMAGE:282265.5
1429	11334	21200	0.9	1.0E-53	U271756.1	NT	Homo sapiens Xa transposon terminal repeat, segment 22
3364	13283	23483	1	1.0E-53	AB020898.1	NT	Homo sapiens DNA, DLEC1 to ORC1L4 gene region, ascidian 1/2 (DLEC1, ORC1L3, ORC1L4 genes, complete cds)
8021	16523	23550	1.42	1.0E-53	PF354201.1	EST_HUMAN	CUH-NH1025-10500-545-402 NH1025 Homo sapiens cDNA
7252	17129	27322	5.74	1.0E-53	X75958.1	NT	H. sapiens mRNA for lymphoma invasion and metastasis 1 (T1AM1) mRNA
6152	16119	24787	0.8	9.0E-54	4607500	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (T1AM1) mRNA
6152	16119	24788	0.8	9.0E-54	4607500	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (T1AM1) mRNA
8244	19439	24939	4.71	9.0E-54	4606783	NT	Homo sapiens IQ motif containing GTPase activating protein 1 (IQGAP1) mRNA
200	10172	19688	3.09	8.0E-54	BC389765.1	EST_HUMAN	601272663.F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3614031.6
1784	11692	21668	1.33	8.0E-54	4504610	NT	Homo sapiens insulin-like growth factor 2 receptor (IGF2R) mRNA
4629	14617	24507	1.26	8.0E-54	4607848	NT	Homo sapiens ubiquitin specific protease 13 (isopeptidase T-3) (USP13) mRNA
4629	14617	24508	1.26	8.0E-54	4607848	NT	Homo sapiens ubiquitin specific protease 13 (isopeptidase T-3) (USP13) mRNA
5030	14617	24507	1.08	8.0E-54	4607848	NT	Homo sapiens ubiquitin specific protease 13 (isopeptidase T-3) (USP13) mRNA
6030	14617	24508	1.08	8.0E-54	4607848	NT	Homo sapiens ubiquitin specific protease 13 (isopeptidase T-3) (USP13) mRNA
6614	16529	26512	20.81	8.0E-54	6005700	NT	Homo sapiens ATP-binding cassette, sub-family A (ABC1), member 6 (ABCA6), mRNA
1759	10393	20180	1.20	7.0E-54	AA812837.1	EST_HUMAN	af79c12.s1 Soares, testis, NIH Homo sapiens cDNA clone 1377046.3 similar to contains MER30.13 MER20 regulative element;
1759	10393	20180	1.20	7.0E-54	AA812837.1	EST_HUMAN	Homo sapiens mRNA for monocyte chemotactic protein-2
1789	11887	21653	1.54	7.0E-54	U16845.1	NT	W65d1.2.1 Soares, placenta, Swisswells, 2NHFP8dAW Homo sapiens cDNA clone IMAGE:267859.3 similar to contains LTR17 b3 LTR17 negative element;
2156	12045	21945	4.91	7.0E-54	N21717.1	EST_HUMAN	

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Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) HR BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7631	17681	27225	2.23	7.0E-54	11417222	NT	Human sapiens similar to nuclear factor related to kappa B binding protein (H- sapiens) (LOC03182), mRNA q6b703.1f Soares, fetal heart UNH191W Homo sapiens cDNA clone IMAGE:170304 3' similar to contains ORF11 ORF repetitive element;
8911	18478		6.24	7.0E-54	AI060188.1	EST_HUMAN	Homo sapiens DNA for MCB, exon 4, 5 and partial cds
22	10009	19802	1.54	6.0E-54	AB020918.1	NT	Homo sapiens DNA for MCB, exon 4, 5 and partial cds
1833	11730	21605	0.87	6.0E-54	450502	NT	Homo sapiens lymphocyte antigen 75 (LY75) mRNA, and translated products
1833	11730	21606	0.87	6.0E-54	450502	NT	Homo sapiens lymphocyte antigen 75 (LY75) mRNA, and translated products
3246	13160	22868	0.84	6.0E-54	9022148	NT	Homo sapiens hypochlorite protein DKFZp34M333 (DKFZp34M333), mRNA
3823	13832	23912	2.4	6.0E-54	4602672	NT	Homo sapiens chlorite channel 9 (CLCN9) mRNA
4350	14285	24040	1.24	6.0E-54	AV1674746.1	EST_HUMAN	AV1674746 TP Homo sapiens cDNA clone TPGAAC10 5'
4774	14658		1.71	6.0E-54	706846.1	NT	H sapiens aka pseudogene, p68 isoform
4630	14659		1.3	6.0E-54	706846.1	NT	H sapiens aka pseudogene, p68 isoform
8760	17659	28143	1.77	6.0E-54	AW813667.1	EST_HUMAN	RC3-ST0197-151009-011-408 ST0197 Homo sapiens cDNA
2104	11963	21953	2.25	6.0E-54	P51523	SWISSPROT	ZINC FINGER PROTEIN 84 (ZINC FINGER PROTEIN 84P2)
176	10147		108.85	4.0E-54	AF110103.1	NT	Tupia belangeri beta-actin mRNA, partial cds
940	10895	20712	41.94	4.0E-54	AA300784.1	EST_HUMAN	EST17199 Jurkat T-cells VI Homo sapiens cDNA 5' end similar to glyceraldehyde-3-phosphate dehydrogenase
1764	11663	21539	3.24	4.0E-54	D38521.1	NT	Human mRNA for KIA00977 gene, partial cds
1764	11663	21537	3.24	4.0E-54	D38521.1	NT	Human mRNA for KIA00977 gene, partial cds
3169	13093		1.17	4.0E-54	AB360383.1	EST_HUMAN	W0351141 Soares, NTL-1 GAC 31 Homo sapiens cDNA clone IMAGE:232269 3' similar to TRO2711 O2711 PRO-POLYDIPYRASE POLYPROTEIN ;
86	1072	19888	5.11	3.0E-54	AA313457.1	EST_HUMAN	EST163371 O2m carcinoma (RCC) cell line Homo sapiens cDNA 5' end
2522	12385	22287	0.92	3.0E-54	AL110383.1	EST_HUMAN	DKFZp434E0751 J1 424 (tyrosinase, hies) Homo sapiens cDNA clone DKFZp434E0751 5'
2583	12154		0.86	3.0E-54	AI028757.1	EST_HUMAN	IL-B1189-100300-007 B1189 Homo sapiens cDNA
5989	16512	25960	1.48	3.0E-54	4602434	NT	Human sapiens BAX non-recruitor tyrosine kinase (BAX) mRNA
6373	10235	26394	1.69	3.0E-54	AA444061.1	EST_HUMAN	462508.1f Soares, parathyroid tumor NIHPPA Homo sapiens cDNA clone IMAGE:1988270 3'
6373	10235	26395	1.69	3.0E-54	AA444061.1	EST_HUMAN	462508.1f Soares, parathyroid tumor NIHPPA Homo sapiens cDNA clone IMAGE:1988270 3'
8452	18309	28565	4.17	3.0E-54	BF346000.1	EST_HUMAN	602019408f1 NCI CGAP Bm27 Homo sapiens cDNA clone IMAGE:4155121 5'
8675	18693	28447	3.34	3.0E-54	AA303862.1	EST_HUMAN	Z7012121 Soares, testis, NHT Homo sapiens cDNA clone IMAGE:721727 5' similar to TRO191315 G191315 ANDROGEN-DEPENDENT EXPRESSED PROTEIN ;
9190	18632	28369	2.86	3.0E-54	AW954599.1	EST_HUMAN	EST1996529 MAGE resequencing, MAGE Homo sapiens cDNA
9242	19714		7	3.0E-54	AW149866.1	EST_HUMAN	RC1-BT0313-131109-011-b09 BT0313 Homo sapiens cDNA
626	10693	20374	6.29	2.0E-54	5931900	NT	Homo sapiens killer cell lectin-like receptor subfamily G, member 1 (KLRG1), mRNA
1342	11248	21055	1.94	2.0E-54	4807184	NT	Homo sapiens nuclear antigen Sp100 (SP100) mRNA

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1529	11434	21290	1.6	2.0E-54	AA050003.1	EST_HUMAN	n7860.s1 nCL CGAP_P78 Homo sapiens cDNA clone IMAGE:120460 similar to contains element L1 repetitive element;
2493	12887	22281	1.3	2.0E-54	AL163176.1	EST_HUMAN	af52903.YT Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2783784 5' similar to
2550	12428	22321	1.82	2.0E-54	AW163210.2	NT	SW-CUL1_HUMAN Q19616 CULLIN HOMOLOG 1; Homo sapiens chromosome 21 segment HS21C070
2665	12763	22887	1.66	2.0E-54	AW057524.1	EST_HUMAN	wy6b12.x1 Scores: NSIF_R6_9W_OT_PA_P_S11 Homo sapiens cDNA clone IMAGE:2552927 3' similar to TRC02084 Q62084 PHOSPHOLIPASE C NEIGHBORING; Homo sapiens chromosome 21 segment HS21C070
3901	13418		4.06	2.0E-54	AA032925.1	EST_HUMAN	n45609.s1 nCL CGAP_P78 Homo sapiens cDNA clone IMAGE:995488 similar to gb:X63777.603 Homo sapiens chromosome 21 segment HS21C070
4110	14010		2.03	2.0E-54	4502642	NT	Homo sapiens chromosome 21 segment HS21C070
4343	14240		1.13	2.0E-54	AL163201.2	NT	Homo sapiens chromosome 21 segment HS21C070
4780	14694	24450	1.48	2.0E-54	7706446	NT	Homo sapiens dephosphorylarginine deiminase type II (LOC81702). mRNA
5166	15023	24760	0.84	2.0E-54	AF038323.1	NT	Homo sapiens hydroxyphenyl receptor alpha 2 subunit (CA024201) gene, exon 7
5393	15283	25118	3.76	2.0E-54	AF038323.1	NT	Homo sapiens small inducible cytokine subfamily A (Cys-Cys) member 14 (SCYA14) mRNA
5440	15360	25417	1.34	2.0E-54	BCA17864.1	EST_HUMAN	t54531.1 UT NCL CGAP_P78 Homo sapiens cDNA clone IMAGE:2291148 5'
5521	15390	24933	3.50	2.0E-54	11426687	NT	Homo sapiens KIA03100 gene product (K03100). mRNA
5573	15468	25564	18.10	2.0E-54	AB045811.1	NT	Homo sapiens mRNA for KIA1551 protein, partial cds
5573	15468	25566	18.19	2.0E-54	AB045811.1	NT	Homo sapiens mRNA for KIA1551 protein, partial cds
6227	16093	25243	8.14	2.0E-54	11426644	NT	Homo sapiens neurofilament 1 (neurofilament, von Reichlinghausen disease, Wilson disease) (NFI). mRNA
7552	17403	27617	3.52	2.0E-54	AB001025.1	NT	Homo sapiens mRNA for brain myosin receptor, complete cds
7749	17599	27821	1.26	2.0E-54	11429127	NT	Homo sapiens Janus kinase 2 (a protein tyrosine kinase) (JAK2). mRNA
8063	18770		2.57	2.0E-54	7657469	NT	Homo sapiens pascualin (pascualin) homolog 1, containing BRCT domain (PES1). mRNA
9053	19244	23216	1.46	2.0E-54	8957387	NT	Homo sapiens period (Orphanlike) homolog 3 (PER3). mRNA
4393	14256		1.07	1.0E-54	BF151416.1	EST_HUMAN	601899230.F1 NH IMC_19 Homo sapiens cDNA clone IMAGE:4128895 5'
9852	19346		2.28	1.0E-54	AU07341.1	EST_HUMAN	AU07341.1 Sugano cDNA library Homo sapiens cDNA clone Z160380 similar to 5'-end region of Human gamma-glutamyl transaminase mRNA, 5 end
1294	11207		14.50	8.0E-55	AU07820.2	NT	Homo sapiens RFB30 gene for RING finger protein
7749	17599	27821	1.26	2.0E-54	11429127	NT	Homo sapiens RFB30 gene for RING finger protein
8530	18402		2.76	8.0E-55	AW409714.1	EST_HUMAN	fb25a02.x1 NIH_MDC_17 Homo sapiens cDNA clone IMAGE:2969007 5'
1005	10981	20526	1.19	7.0E-55	R09346.1	EST_HUMAN	Y2904.x1 Scores: fetal liver spleen INF1S Homo sapiens cDNA clone IMAGE:127998 5' similar to
7297	17173	27173	1.26	7.0E-55	AA050003.1	EST_HUMAN	af52903.YT Scores: testis NIH Homo sapiens cDNA clone IMAGE:1407260 3'
7315	17181	27393	1.59	7.0E-55	AU135009.1	EST_HUMAN	AU135009.1 Homo sapiens cDNA clone IMAGE:1011576 5'

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Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6541	18413	28979	12.76	7.0E-55	M561056.1	EST HUMAN	1q2906.41 NCI G2AP_U1 Homo sapiens cDNA clone IMAGE:5210249 3'
6541	18413	28980	12.76	7.0E-55	M561056.1	EST HUMAN	1q2906.41 NCI G2AP_U1 Homo sapiens cDNA clone IMAGE:2210249 3'
6821	18948	28980	4.3	7.0E-55	H2398.1	EST HUMAN	Ym7007.r1 Scores infant brain NIH Homo sapiens cDNA clone IMAGE:50444 5'
6803	18617	28980	1.98	8.0E-55	AB040934.1	NT	Homo sapiens mRNA for KIAA1501 protein, partial cds
1732	11633	21501	1.12	5.0E-55	AA704971.1	EST HUMAN	Z95009.s1 Scores_fetal_liver_spleen_INFL3_S1 Homo sapiens cDNA clone IMAGE:462617 3'
1732	11633	21501	1.12	5.0E-55	AA704971.1	EST HUMAN	Z95009.s1 Scores_fetal_liver_spleen_INFL3_S1 Homo sapiens cDNA clone IMAGE:462617 3'
5941	15946	25969	1.92	6.0E-55	4502240	NT	Homo sapiens arylsulfoxidase E (chondrocyte-specific) (ARSE), mRNA
5941	15946	25970	1.92	5.0E-55	4502240	NT	Homo sapiens arylsulfoxidase E (chondrocyte-specific) (ARSE), mRNA
7229	17106	27296	2.06	5.0E-55	4502302	NT	Homo sapiens protein tyrosine phosphatase, receptor type, alpha polypeptide (PTPRA), mRNA
7770	17620	27851	1.96	5.0E-55	AB014511.1	NT	Homo sapiens mRNA for KIAA0311 protein, partial cds
7770	17620	27852	1.96	5.0E-55	AB014511.1	NT	Homo sapiens mRNA for KIAA0311 protein, partial cds
7869	17719	27865	1.10	5.0E-55	6453705	NT	Homo sapiens raf (chicken)-like 2 (NELL2), mRNA
9283	18953	19843	2.13	5.0E-55	11417672	NT	Homo sapiens pectadillo (zebrafish) homolog 1, containing BCR1 domain (PES1), mRNA
49	12659	19843	1.96	4.0E-55	AW067994.1	EST HUMAN	ES137034 IMAGE: ressequences, IMAGE Homo sapiens cDNA
689	10501	20009	33.60	4.0E-55	6326973	NT	Homo sapiens RNA binding motif protein, Y chromosome, family 1, member A1 (RBMY1A1) mRNA
1422	11328	21183	1.88	4.0E-55	7661718	NT	Homo sapiens predicted osteoblast protein (OS798), mRNA
1422	11328	21194	1.95	4.0E-55	7661713	NT	Homo sapiens predicted osteoblast protein (OS798), mRNA
1498	11402		1.26	4.0E-55	BF081411.1	EST HUMAN	750201 Scores, XNF_P6_WT_PJA3_S1 Homo sapiens cDNA clone IMAGE:3390043 3' similar to contains 1.18 L1 repetitive element;
1978	11972	21763	1.53	4.0E-55	4506180	NT	Homo sapiens proteasome (prosome, multicatalytic) subunit, alpha type, 2 (PSMA2) mRNA
1979	11972	21764	1.53	4.0E-55	4506180	NT	Homo sapiens proteasome (prosome, multicatalytic) subunit, alpha type, 2 (PSMA2) mRNA
2039	11920	21824	7.73	4.0E-55	4003314	NT	Homo sapiens diacylglycerol kinase, gamma (DGKG) mRNA
2039	11920	21825	7.73	4.0E-55	4003314	NT	Homo sapiens diacylglycerol kinase, gamma (DGKG) mRNA
2282	12146	22045	1.26	4.0E-55	4607794	NT	Homo sapiens ubiquitin-conjugating enzyme E2 variant 1 (UBE2V1) mRNA
2545	12419		1.04	4.0E-55	AJ271739.1	NT	Homo sapiens Xq pseudautosomal region, segment 12
3242	13766	22084	1.38	4.0E-55	AL163900.2	NT	Homo sapiens chromosome 21 segment HS21C10
6857	16726		6.44	4.0E-55	AL163210.2	EST HUMAN	Homo sapiens chromosome 21 segment HS21C010
6859	18428		4.46	4.0E-55	W28189.1	EST HUMAN	43-c Human retina cDNA randomly primed sublibrary Homo sapiens cDNA
9200	18933		2.36	4.0E-55	BF030941.1	EST HUMAN	6019865762 NIH MGCC, 17 Homo sapiens cDNA clone IMAGE:4126338 5'
9139	18954		2.76	3.0E-55	BE179519.1	EST HUMAN	PM1-HT0603-090300-007-g08 HT0603 Homo sapiens cDNA
9996	19356		1.95	3.0E-55	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C094
3793	10327	20150	2.3	2.0E-55	X57147.1	NT	Human endogenous retrovirus PHE-1 (ERV9)
539	10490		0.96	2.0E-55	M10976.1	NT	Human endogenous retroviral DNA (4-1), complete proviral segment
533	10570	20383	3.08	2.0E-55	4507298	NT	Homo sapiens sialin-binding protein 1 (S7XB1) mRNA, and translated products

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Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Meat Similar (Top) Ht BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2268	12855	22656	0.79	2.0E-45	4507798	NT	Homo sapiens ubiquitin protein ligase E3A (human papilloma virus E6-associated protein, Angelman syndrome) (UBE3A) mRNA
4965	14551	24342	2.97	2.0E-45	BE710986.1	EST HUMAN	GM1-170767-100900-357-g03 HT0876 Homo sapiens cDNA
7284	17160		4.3	2.0E-45	A002836.1	EST HUMAN	smBR05.01 Stage-specific schizo brain 511 Homo sapiens cDNA clone IMAGE:684185 3' similar to contains THR.L2 THR repetitive element
8319	18196	28446	2.2	2.0E-45	AU119344.1	EST HUMAN	AU119344 HEMBA1 Homo sapiens cDNA clone HEMBA1005983 5'
91	10075	19891	1.6	1.0E-45	4503060	NT	Homo sapiens mannose-5-phosphate receptor (cation dependent) (M6PR) mRNA
182	10154	10099	11.9	1.0E-45	U09823.1	NT	Oryzopsis scutellus New Zealand white elongation factor 1 alpha (HsBef12) mRNA, complete cds
1132	11046	20898	3.55	1.0E-45	AB020710.1	NT	Homo sapiens mRNA for KIAA0903 protein, partial cds
1907	11802	21690	0.96	1.0E-45	BE277891.1	EST HUMAN	601120118T NIH_MGC_20 Homo sapiens cDNA clone IMAGE:2607027 5'
1907	11802	21681	0.86	1.0E-45	BE277891.1	EST HUMAN	601120118T NIH_MGC_20 Homo sapiens cDNA clone IMAGE:2607027 5'
2277	12651		2.3	1.0E-45	8903174	NT	Homo sapiens SMA3 (SMA3) mRNA
2280	12651	22071	1.63	1.0E-45	U500980.1	NT	Homo sapiens testis-specific Testis Transcript Y1 (TTY1) mRNA, partial cds
2470	12340	22335	3.16	1.0E-45	X51111.1	NT	Homo sapiens mRNA for 4-14-11E a MHC class I molecule (major histocompatibility complex)
2507	12381	22271	4.71	1.0E-45	AB007868.2	NT	Homo sapiens mRNA for KIAA0903 protein, partial cds
2507	12381	22272	4.71	1.0E-45	AB007930.2	NT	Homo sapiens mRNA for KIAA0903 protein, partial cds
2508	12439	22331	1.35	1.0E-45	U50507.1	NT	Homo sapiens CLP mRNA, partial cds
3303	13282	23082	1.16	1.0E-45	W28189.1	EST HUMAN	4328 Human retina cDNA randomly primer sublibrary Homo sapiens cDNA
3307	13817	23597	3.47	1.0E-45	AL165207.2	NT	Homo sapiens chromosome 21 segment HS21C087
4197	14097	23876	1.04	1.0E-45	AL165210.2	NT	Homo sapiens chromosome 21 segment HS21C010
4721	14097	24392	0.99	1.0E-45	AB037163.1	NT	Homo sapiens DSCR3b mRNA, complete cds
5021	14097	24393	0.99	1.0E-45	AB037163.1	NT	Homo sapiens DSCR3b mRNA, complete cds
5074	15700	25809	5.78	1.0E-45	8923122	NT	Homo sapiens hypodermal protein FL20128 (FL20128), mRNA
5794	15700	25809	5.78	1.0E-45	11433046	NT	Homo sapiens head domain and RLD 2 (HERC2), mRNA
8284	18163	29405	4.74	1.0E-45	AL165210.2	NT	Homo sapiens chromosome 21 segment HS21C010
8284	18163	29405	4.74	1.0E-45	AL165210.2	NT	Homo sapiens chromosome 21 segment HS21C010
8745	17894	29133	2.89	1.0E-45	U50990.1	NT	Homo infant brain unknown product mRNA, complete cds
8860	18371	29569	2.04	1.0E-45	10597621	NT	Homo sapiens DNA-binding protein (LOC955242), mRNA
6568	16221	26383	1.81	9.0E-46	BE378041.1	EST1 HUMAN	Y10503.1 Sources adult brain N24HB55V Homo sapiens cDNA clone IMAGE:173044 5' similar to contains THR repetitive element
2703	12997	22457	5.18	7.0E-46	AF19354.1	EST HUMAN	RG1-CT0252-281099-013-b07 CT0252 Homo sapiens cDNA
6804	16563	26538	1.84	7.0E-46	AW361213.1	EST HUMAN	

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Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6804	16863	28639	1.84	7.0E-56	AW381213.1	EST HUMAN	RC1-CT0282-281069-013-b07 CT0282 Homo sapiens cDNA
16860	11668	21434	2.20	6.0E-56	AW597712.1	EST HUMAN	RC3-BN0053-170200-011-H01 BN0053 Homo sapiens cDNA
7940	17760		1.31	5.0E-56	W28169.1	EST HUMAN	4kb3 Homo sapiens retina cDNA randomly primed sublibrary Homo sapiens cDNA
9376	19701	24002	2.88	6.0E-56	H58006.1	EST HUMAN	CHP220038 Chromosome 22 exon Homo sapiens cDNA clone C22_65 5'
25	10012	18805	6.15	4.0E-56	AF141346.1	NT	Homo sapiens beta-tubulin mRNA, complete cds
25	10012	18806	6.15	4.0E-56	AF141346.1	NT	Homo sapiens beta-tubulin mRNA, complete cds
2076	12841	22431	4.11	4.0E-56	4507728.1	NT	Homo sapiens tubulin, beta polypeptide (TUBB) mRNA
2076	12841	22431	4.11	4.0E-56	4507728.1	NT	Homo sapiens tubulin, beta polypeptide (TUBB) mRNA
2076	12841	22432	4.11	4.0E-56	4507728.1	NT	Homo sapiens X-linked embryonic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
2781	10457	20269	3.05	4.0E-56	AF035281.1	NT	Homo sapiens uncharacterized bone marrow protein BM031 mRNA, complete cds
5788	15694	25602	6.20	4.0E-56	AF17508.1	NT	Homo sapiens uncharacterized bone marrow protein BM031 mRNA, complete cds
5788	15694	25603	6.20	4.0E-56	AF17508.1	NT	Homo sapiens uncharacterized bone marrow protein BM031 mRNA, complete cds
7666	17948	26500	1.23	4.0E-56	AF043346.1	NT	Homo sapiens lymphocyte-specific protein 1 (LSP1) gene, LSP-1.7 allele, partial cds
8295	18174	28417	8.75	4.0E-56	U480065.1	EST HUMAN	hmr5912.1 NCI CCAP Bm25 Homo sapiens cDNA clone IMAGE:2163048.3
8295	18174	28417	8.75	4.0E-56	U480065.1	EST HUMAN	hmr5912.1 NCI CCAP Bm25 Homo sapiens cDNA clone IMAGE:2163048.3
1318	11225	21081	9.86	3.0E-56	8924022.1	NT	Homo sapiens hypothetical protein PRO1304 (PRO1304) mRNA
2103	11622	21622	2.7	3.0E-56	8912627.1	NT	Homo sapiens oncogene TCF1 (TCF1) mRNA
3068	13013	22804	1.68	3.0E-56	AA258263.1	EST HUMAN	EST28889 Cerebellum II Homo sapiens cDNA 9' and
3068	13013	22805	1.58	3.0E-56	AA258263.1	EST HUMAN	EST28889 Cerebellum II Homo sapiens cDNA 9' and
3761	13574		1.39	3.0E-56	AF055561.1	NT	Homo sapiens MHC class I region
4327	14224	24066	4.06	3.0E-56	AL03208.2	NT	Homo sapiens chromosome 21 segment HS21C088
4470	14594	24164	2.14	3.0E-56	5902005.1	NT	Homo sapiens superfamily 21c-like activity 2 (S. cerevisiae homolog) (SKIVL2), mRNA
5488	15405	25407	1.57	3.0E-56	4759103.1	NT	Homo sapiens spectrolectin, cmyc and kiaz-like domains proteoglycan (SPOCK) mRNA
5488	15405	25408	1.47	3.0E-56	4759103.1	NT	Homo sapiens spectrolectin, cmyc and kiaz-like domains proteoglycan (SPOCK) mRNA
6169	16003	28141	6.34	3.0E-56	11421124.1	NT	Homo sapiens lysosomal-associated membrane protein 2 (LAMP2) mRNA
7117	16994	27185	5.74	3.0E-56	11418704.1	NT	Homo sapiens bone morphogenetic protein 5 (BMP5), mRNA
7987	17837	28078	1.62	3.0E-56	11434656.1	NT	Homo sapiens KIAA0317 gene product (KIAA0317), mRNA
8124	18012	28266	10.72	3.0E-56	AB042566.1	NT	Homo sapiens mRNA, similar to rat noggin, complete cds
8632	18467	28771	3.89	3.0E-56	5902013.1	NT	Homo sapiens nuclear pore complex interacting protein (NPIP), mRNA
8632	18467	28772	3.89	3.0E-56	5902013.1	NT	Homo sapiens nuclear pore complex interacting protein (NPIP), mRNA
9240	18855	26316	2.3	3.0E-56	11434876.1	NT	Homo sapiens caveolin 3 (CAV3), mRNA
9240	18855	26316	2.3	3.0E-56	11434876.1	NT	Homo sapiens caveolin 3 (CAV3), mRNA



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Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
513	10465		2.94	2.0E-56	AF109818.1	EST_HUMAN	zfp928.21 Stratiagene neurophilium (8937281) Homo sapiens cDNA clone IMAGE:645206 3'
716	12975	20477	1.19	2.0E-56	BC064386.1	EST_HUMAN	RC4-BT0310-110300-016-H10 BT0310 Homo sapiens cDNA
716	12975	20477	1.19	2.0E-56	BC064386.1	EST_HUMAN	RC4-BT0310-110300-016-H10 BT0310 Homo sapiens cDNA
2334	12215	22113	1.02	2.0E-56	N20901.1	NT	Human cAMP phosphodiesterase alpha subunit (CGPR-A) mRNA, complete cds
2334	12215	22113	1.02	2.0E-56	N20901.1	NT	Human cAMP phosphodiesterase alpha subunit (CGPR-A) mRNA, complete cds
2659	12886	22384	0.83	2.0E-56	AB037835.1	NT	Homo sapiens mRNA for KIAA1414 protein, partial cds
3480	13405	23210	1.08	2.0E-56	AF170318.1	EST_HUMAN	AV1703184 ADB Homo sapiens cDNA clone ADBCF010 5'
604	10987		1.44	1.0E-56	AF190300.1	NT	Mesencephalic protein tyrosine phosphatase (PRL-1) mRNA, complete cds
3622	13339	23321	1.79	1.0E-56	AF156833.1	EST_HUMAN	h229211.x1 NCI CGAP G03 Homo sapiens cDNA clone IMAGE:284642 3'
3622	13339	23322	1.79	1.0E-56	AF156833.1	EST_HUMAN	h229211.x1 NCI CGAP G03 Homo sapiens cDNA clone IMAGE:284642 3'
4693	14338	24600	1.52	1.0E-56	AB05162.1	EST_HUMAN	QV-BT077-130169-076 BT077 Homo sapiens cDNA
7760	17930	27463	1.86	1.0E-56	AW845927.1	EST_HUMAN	RC2-CT0163-220599-001-E02 CT0163 Homo sapiens cDNA
606	10543		1.97	9.0E-57	AW809855.1	EST_HUMAN	QV-C-OT0033-070300-162-A03 OT0033 Homo sapiens cDNA
4109	14039	23786	1.17	9.0E-57	U758279.1	NT	Homo sapiens EphA4 (EPHA4) mRNA
4109	14039	23787	1.17	9.0E-57	U758279.1	NT	Homo sapiens EphA4 (EPHA4) mRNA
131	9293	19760	1.56	8.0E-57	8923349.1	NT	Homo sapiens hypothetical protein FL20371 (FLJ20371) mRNA
264	10265	20070	2.91	8.0E-57	AW814035.1	EST_HUMAN	QV-LST0284-181152-037-65 ST0284 Homo sapiens cDNA
866	10722	20942	5.79	8.0E-57	AW294599.1	EST_HUMAN	x6561011 NCI COR3 Br183 Homo sapiens cDNA clone IMAGE:2796261 3' similar to gb-U56575
1774	11273	21591	1.63	8.0E-57	AA06103.1	EST_HUMAN	INTERFERON-GAMMA RECEPTOR BETA CHAIN PRECURSOR (HUMAN);
3336	13265	23060	1.02	8.0E-57	U758279.1	NT	25516121 Soares, Jellis, NIT Homo sapiens cDNA clone IMAGE:757151 5'
3336	13265	23061	1.02	8.0E-57	U758279.1	NT	Homo sapiens EphA4 (EPHA4) mRNA
6107	14075	24760	0.86	8.0E-57	AA071001.1	EST_HUMAN	q657602.21 Soares, N.L.T., GSC ST Homo sapiens cDNA clone IMAGE:189169 3'
6207	14924	25004	0.36	8.0E-57	11418195	NT	Homo sapiens scf25.2, mitochondrial (ACO2), mRNA
5888	15794	26915	1.76	8.0E-57	AB023177.1	NT	Homo sapiens mRNA for KIAA0960 protein, partial cds
5888	15794	26916	1.76	8.0E-57	AB023177.1	NT	Homo sapiens mRNA for KIAA0960 protein, partial cds
6557	16415	26566	67.79	8.0E-57	AB020844.1	NT	Homo sapiens mRNA for KIAA0837 protein, partial cds
6557	16415	26566	67.76	8.0E-57	AB020844.1	NT	Homo sapiens mRNA for KIAA0837 protein, partial cds
8771	9069	19790	3.32	8.0E-57	8923349.1	NT	Homo sapiens monocarboxylate transporter 3 (SLC16A8), mRNA
5468	19097		1.27	8.0E-57	70195239	NT	Homo sapiens SH3-domain binding protein 1 (SH3BP1), mRNA
9507	19188	25251	2.02	8.0E-57	11545732.1	NT	Homo sapiens SH3-domain binding protein 1 (SH3BP1), mRNA
9522	19188	25251	1.39	8.0E-57	11545732.1	NT	Homo sapiens SH3-domain binding protein 1 (SH3BP1), mRNA
2562	12462	22563	2.02	7.0E-57	7657592.1	NT	Homo sapiens smg GDS-ASSOCIATED PROTEIN (SMAP), mRNA
2562	12462	22564	2.02	7.0E-57	7657592.1	NT	Homo sapiens smg GDS-ASSOCIATED PROTEIN (SMAP), mRNA

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Table 4

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) HR BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3212	13136	22937	0.92	7.0E-57	7242108	NT	Homo sapiens NME7 (NME7), mRNA
3212	13136	22938	0.92	7.0E-57	7242108	NT	Homo sapiens NME7 (NME7), mRNA
3233	13157	22956	6.49	7.0E-57	6005979	NT	Homo sapiens Kruppel-like factor 8 (KLF8), mRNA
3301	13173	23900	2.17	7.0E-57	AF012872.1	NT	Homo sapiens phosphatidylinositol 4-kinase 230 (pik4230) mRNA, complete cds
3801	13713	23501	2.17	7.0E-57	AF012872.1	NT	Homo sapiens phosphatidylinositol 4-kinase 230 (pik4230) mRNA, complete cds
6634	19656		2.96	5.0E-57	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region, segment 1/2
3804	13608	23935	1.23	4.0E-57	AB028688.1	EST	Homo sapiens DNA, DLEC1 to ORGTL4 gene region, section 1/2 (DLEC1, ORGTL3, ORGTL4 genes, complete cds)
4935	14813	24357	0.96	4.0E-57	BE785640.1	EST	601471229FT NIH_MGC_07 Homo sapiens cDNA clone IMAGE:3874135 5'
787	10716	20558	0.76	3.0E-57	4507708	NT	Homo sapiens ubiquitin protein ligase E3A (human papilloma virus E6-associated protein, Angelman syndrome) (UBE3A) mRNA
1306	11215		11.34	3.0E-57	AA230279.1	EST	ncf1807.s1 NCI_GCAP_P1 Homo sapiens cDNA clone IMAGE:108037 similar to SW-6510_HUMAN
2342	12222	22118	2.83	3.0E-57	AA448335.1	EST	P46753.46S RIBOSOMAL PROTEIN S10.1
2670	12535	22425	1.82	3.0E-57	BE676822.1	EST	763410.1 NCI_GCAP_011 Homo sapiens cDNA clone IMAGE:3296443 3' similar to WIP-Y47HCC.2
2670	12535	22425	1.82	3.0E-57	BE676822.1	EST	763410.1 NCI_GCAP_011 Homo sapiens cDNA clone IMAGE:3296443 3' similar to WIP-Y47HCC.2
3514	13453	23230	1.15	3.0E-57	AF532703.1	NT	Homo sapiens cell line 15420 is chloride ion current inducer protein (Ch) gene, complete cds
3530	13553		115.94	3.0E-57	AY083044.1	EST	RCS-C10254-110330-027-010 C10254 Homo sapiens cDNA
5723	15630	25733	3.34	3.0E-57	BE766571.1	EST	01058690FT NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3944302 5'
6796	16615	25805	3.95	3.0E-57	W29150.1	EST	426 Human retina cDNA randomly primed sublibrary Homo sapiens cDNA
6751	16530	25817	1.95	3.0E-57	11545708	NT	Homo sapiens hypothetical protein FLJ11655 (FLJ11655), mRNA
6751	16530	25818	1.96	3.0E-57	11545708	NT	Homo sapiens hypothetical protein FLJ11655 (FLJ11655), mRNA
7142	17019	27212	4.06	3.0E-57	AU117656.1	EST	AUT117656 HEMBA1 Homo sapiens cDNA clone HEMBA1001910 5'
8279	18159	28400	20.31	3.0E-57	AW248374.1	EST	2820473.3prime NIH_MGC_7 Homo sapiens cDNA clone IMAGE:2820473 5'
9247	19721	24807	5.2	3.0E-57	W23871.1	EST	245641.17 Soares_fetal_lung_NHL19W Homo sapiens cDNA
6608	16628		2.15	3.0E-57	AW178575.1	EST	RCCHT0112-080599-001-C06 HT0112 Homo sapiens cDNA clone IMAGE:305446 5'
2699	12553	22453	1.19	2.0E-57	AA545419.1	EST	sk032062.1 Soares_parallelized_lung_Nb-HPA Homo sapiens cDNA clone IMAGE:305446 5'
3352	13509		2.91	2.0E-57	AL032042.2	NT	RCCHT0112-080599-001-C06 HT0112 Homo sapiens cDNA clone IMAGE:305446 5'
3504	13421	23223	0.84	2.0E-57	W07702.1	EST	Y681801.17 Soares_fetal_liver_spleen_INF1S Homo sapiens cDNA clone IMAGE:125809 5'
3504	13421	23224	0.84	2.0E-57	W07702.1	EST	Y681801.17 Soares_fetal_liver_spleen_INF1S Homo sapiens cDNA clone IMAGE:125809 5'
4409	14303	24066	6.88	2.0E-57	AL032852.2	NT	Homo sapiens chromosome 21 segment H321C083

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) HR BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5476	15388		1.43	2.0E-57	AA016131.1	EST_HUMAN	zsf31cd5.11 Source ratna N26-4HR Homo sapiens cDNA clone IMAGE:300584 5' similar to cortactin L1.8 L1 repetitive element;
5676	15385		28.14	2.0E-57	BF115966.1	EST_HUMAN	788004.x1 NCI CGAP OV18 Homo sapiens cDNA clone IMAGE:357606 3' similar to contains TAR1.11 MEZ22 repetitive element;
7017	16894	27084	1.29	2.0E-57	AF45462.1	NT	Homo sapiens cell-line K51 transcriptional regulatory protein p54 mRNA, complete cds
7595	17615	27742	1.71	2.0E-57	AF567722.1	NT	Homo sapiens 17-beta-hydroxysteroid dehydrogenase IV (HSD17B4) gene, exons 3 and 4
8592	18460	28729	2.22	2.0E-57	11424034	NT	Homo sapiens hypothetical protein FLJ20417 (FLJ20417), mRNA
8592	18460	28730	2.22	2.0E-57	11424034	NT	Homo sapiens hypothetical protein FLJ20417 (FLJ20417), mRNA
2184	12071	21073	1.12	1.0E-57	AW503268.1	EST_HUMAN	h33263.x1 NCI CGAP L224 Homo sapiens cDNA clone IMAGE:3078548 5'
7046	16922		2.08	1.0E-57	BE043031.1	EST_HUMAN	HYPOPHYSICAL 9.3 KD PROTEIN;
9401	19055		3.47	1.0E-57	AW470791.1	EST_HUMAN	h333406.x1 NCI CGAP J3412 Homo sapiens cDNA clone IMAGE:2875466 3' similar to contains THR133 THR repetitive element;
9363	19223	25235	1.43	9.0E-58	BE395091.1	EST_HUMAN	60130048BFT NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3831010 5'
574	10512		1.41	8.0E-58	BE686715.1	EST_HUMAN	60144846BFT NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3920211 5'
583	10575	20390	2.62	8.0E-58	AT93576.1	EST_HUMAN	h34207.x1 NCI CGAP O223 Homo sapiens cDNA clone IMAGE:3220181 3' similar to TR-O15475 O15475 UNNAMED HERV4 PROTEIN;
588	10575	20390	2.62	8.0E-58	AT93576.1	EST_HUMAN	h34207.x1 NCI CGAP O223 Homo sapiens cDNA clone IMAGE:3220181 3' similar to TR-O15475 O15475 UNNAMED HERV4 PROTEIN;
1813	11710	21599	2.23	8.0E-58	11434921	NT	Homo sapiens putative protein O-mannosyltransferase (POMT2), mRNA
2945	12872	21599	2.23	8.0E-58	11434921	NT	Homo sapiens putative protein O-mannosyltransferase (POMT2), mRNA
2945	12872		2.83	8.0E-58	7706152	NT	Homo sapiens DRH1 protein (LOC51304), mRNA
8321	18112		5.01	7.0E-50	5174542	NT	Homo sapiens MAD5 box transcription enhancer factor 2, polypeptide B (myocyte enhancer factor 2b) (MEF2B) mRNA
8300	18179	28425	3.25	7.0E-58	AW604109.1	EST_HUMAN	UHFH-BNO-afg-10-0-UL11 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3076867 5'
8300	18179	28426	3.25	7.0E-58	AW604109.1	EST_HUMAN	UHFH-BNO-afg-10-0-UL11 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3076867 5'
2307	12044	21997	0.9	6.0E-58	BE395091.1	EST_HUMAN	60130048BFT NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3831010 5'
2324	12205	22105	2.96	6.0E-58	AW130688.1	EST_HUMAN	U003665 NT2P33 Homo sapiens cDNA clone NT2P33P001263 5'
2871	12796	22592	1.19	6.0E-58	BE242150.1	EST_HUMAN	TCAP1E1219 Pediatric acute myelogenous leukemia cell (FAB M1) Baycol-HGSC project-TCAA Homo sapiens cDNA clone TCAP1E1219
2871	12796	22593	1.19	6.0E-58	BE242150.1	EST_HUMAN	TCAP1E1219 Pediatric acute myelogenous leukemia cell (FAB M1) Baycol-HGSC project-TCAA Homo sapiens cDNA clone TCAP1E1219
7509	17750	28000	1.3	6.0E-58	11434746	NT	Homo sapiens protein tyrosine phosphatase, non-receptor type 21 (PTPN21), mRNA
9492	19109		1.8	6.0E-58	11433291	NT	Homo sapiens hypothetical protein FLJ20454 (FLJ20454), mRNA

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Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORE SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
297	10261	20081	2.9	5.0E-58	4507334	NT	Homo sapiens synaptobin 1 (SYNU1), mRNA
693	10269	20451	5.97	5.0E-58	BE763684.1	EST	Homo sapiens cDNA
1176	10988	20332	4.47	5.0E-58	AV767948.1	EST	Homo sapiens cDNA
1176	10988	20333	4.47	5.0E-58	AV767948.1	EST	Homo sapiens cDNA
1177	10988	20332	2.90	5.0E-58	AV767948.1	EST	Homo sapiens cDNA
1177	10988	20333	2.96	5.0E-58	AV767948.1	EST	Homo sapiens cDNA
3281	13202	28002	3.66	5.0E-58	AA984183.1	EST	Homo sapiens cDNA
5459	15378		2.21	5.0E-58	11462382	NT	Homo sapiens placenta-specific 1 (PLAC1), mRNA
5748	18555	25704	5.66	5.0E-58	U20072.1	EST	Homo sapiens cDNA
5894	18560	28924	1.45	5.0E-58	11421330	NT	Homo sapiens acid protein, Xerops laevis-like (APXL), mRNA
6647	19527	26721	8.77	5.0E-58	8922683	NT	Homo sapiens hypodermal protein FL10828 (FL10828), mRNA
7529	19719	27923	1.56	5.0E-58	AL163218.2	NT	Homo sapiens chromosome 21 segment HS21D18
9715	19950		3.26	5.0E-58	11526293	NT	Homo sapiens cat eye syndrome chromosome region, candidate 1 (CECR1), mRNA
9878	19982		2.49	5.0E-58	11418177	NT	Homo sapiens Fm GTPase activating protein 1 (RANGAP1), mRNA
399	10325	20147	17.97	4.0E-58	4602302	NT	Homo sapiens ATP synthase, H <sup>+</sup> transporting, mitochondrial F1 complex, O subunit (atgomyrin sensitivity conferring protein) (ATP8O), mRNA
779	10709	20548	1.58	4.0E-58	4504634	NT	Homo sapiens interlaminar A receptor, beta (L1OR5), mRNA
1452	11357	21221	1.24	4.0E-58	4503648	NT	Homo sapiens coagulation factor IX (plasma thromboplastin component, Christmas disease, hemophilia B) (F9), mRNA
2831	12405	22297	0.97	4.0E-58	AF265556.1	NT	Homo sapiens ubiquitin-conjugating BIR-domain enzyme APOLLON mRNA, complete cds
2830	12481	22351	2.7	4.0E-58	U32521.1	NT	Human beta-prime-actinin (BAM22) gene, exon 3
3283	13204	23004	1.1	4.0E-58	D15470.1	NT	Human mRNA, Xq terminal portion
3680	13594	23960	2.11	4.0E-58	B031660	NT	Homo sapiens EGF-like repeats and disordin like domains 3 (EDIL3), mRNA
8651	18615	28708	7.54	4.0E-58	11424050	NT	Homo sapiens E1B-55kDa-associated protein 6 (E1B-AP6), mRNA
332	10291		1.17	3.0E-58	R17879.1	EST	Y10402.71 Soares infant brain N1B Homo sapiens cDNA clone IMAGE:31893.5
1397	11273	21129	2.34	3.0E-58	4738991	NT	Homo sapiens perlepin YY (PYY) mRNA
3141	13066	22864	2.91	3.0E-58	BF56848.1	EST	Homo sapiens cDNA clone IMAGE:4309943.5
3141	13066	22864	2.91	3.0E-58	BF56848.1	EST	Homo sapiens cDNA clone IMAGE:4309943.5
8002	15017	26031	1.39	3.0E-58	AV11297.1	EST	AV11297.7 DCA Homo sapiens cDNA clone DCA2504.5
925	10850	20606	8.16	2.0E-58	AF108524.1	NT	Homo sapiens 5-aminodeoxyribosyl synthase 2 (ALAS2) gene, complete cds
							bed80407.v1 NIH, MSC_76 Homo sapiens cDNA clone IMAGE:282273.5 similar to gtx:205931.60S
							bed80407.v1 NIH, MSC_76 Homo sapiens cDNA clone IMAGE:282273.5 similar to gtx:205931.60S
							protein (MOLISE)
1288	11175	24983	12.08	2.0E-58	BE208524.1	EST	Homo sapiens cDNA clone IMAGE:3901911.5
5288	19441		4.42	2.0E-58	BE207186.1	EST	Homo sapiens cDNA clone IMAGE:3901911.5

Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NC:	Exon SEQ ID NC:	ORF SEQ ID NC:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6288	19441	26010	4.42	2.0E-58	BE007186.1	EST_HUMAN	1001466661FT NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3901811 5'
6241	16628	25731	1.74	2.0E-58	A124874.1	EST_HUMAN	ens7602.x1 Johnston frontal cortex Homo sapiens cDNA clone IMAGE:139974 3' similar to WP-ZK328.1
6246	16112	25053	2.76	2.0E-58	AF134633.1	NT	CE09095 UBQUITIN CONJUGATING ENZYME1; RECOVERIN SUBFAMILY OF EF-HAND CALCIUM BINDING PROTEIN;
6249	16112	25384	2.76	2.0E-58	AF134633.1	NT	Homo sapiens endocytic receptor Endo180 (ENDO180) mRNA, complete cds
8123	18011	29269	10.79	2.0E-58	BF007745.1	EST_HUMAN	501690812FT NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4131891 5'
8332	18269	29458	2.26	2.0E-58	AW872441.1	EST_HUMAN	hm2508.x1 NCI_CGAP_Thy1 Homo sapiens cDNA clone IMAGE:3013071 3'
705	10358	20463	0.93	1.0E-58	M59134.1	NT	Human complement component C5 mRNA, 3' and
1052	10959	20811	5.45	1.0E-58	8274549	NT	Homo sapiens NADH dehydrogenase (Ubiquinone) 1 beta subcomplex, 9 (29Q; B22) (NDUFB9), mRNA
1305	11212	21097	2.17	1.0E-58	AW957182.1	EST_HUMAN	ES1356222 IMAGE_ressequenes; MAGD Homo sapiens cDNA
1305	11212	21098	2.17	1.0E-58	AW957182.1	EST_HUMAN	ES1356222 IMAGE_ressequenes; MAGD Homo sapiens cDNA
1375	11261	21133	1.07	1.0E-58	AJ758933.1	EST_HUMAN	Homo sapiens paraf A-F4 gene, exons 2 to 7 and AU repeat elements
1841	11545	21495	2.02	1.0E-58	BE466132.1	EST_HUMAN	hy1083.x1 NCI_CGAP_G62 Homo sapiens cDNA clone IMAGE:158205 3'
2771	12653	22327	0.98	1.0E-58	4758169	NT	Homo sapiens steroid regulatory element binding transcription factor 2 (SREBF-2) mRNA
3463	13409	22515	0.96	1.0E-58	4758051	NT	Homo sapiens chondroitin sulfate proteoglycan 2 (cartacan) (CSPG2) mRNA
3463	13409	22516	0.96	1.0E-58	4758051	NT	Homo sapiens chondroitin sulfate proteoglycan 2 (cartacan) (CSPG2) mRNA
3650	13573	22590	0.84	1.0E-58	4507628	NT	Homo sapiens transition protein 1 (during histone to protamine replacement) (TNP1) mRNA
4027	14515	24506	0.88	1.0E-58	U69953.1	NT	Human phosphotransferase (NEC2) gene, exon 1
4955	14775	24555	4.96	1.0E-58	A1141063.1	EST_HUMAN	Homo sapiens myosin (M-protein) 21 (MYO21), mRNA
7148	17028	27217	6.7	1.0E-58	4505314	NT	H. sapiens immunoglobulin kappa light chain variable region L14
8665	18700	27217	3.46	1.0E-58	X33392.1	NT	Homo sapiens TATA box binding protein (TBP) mRNA
2182	12059	21971	27.47	8.0E-59	4507378	NT	Homo sapiens TATA box binding protein (TBP) mRNA
6759	16938	29528	1.2	8.0E-59	AJ701963.1	EST_HUMAN	wh18005.x1 NCI_CGAP_Ki611 Homo sapiens cDNA clone IMAGE:2384171 3'
171	12680	29528	1.83	8.0E-59	BF036327.1	EST_HUMAN	h01488031FT NIH_MGC_56 Homo sapiens cDNA clone IMAGE:3952065 5'
3088	13015	22907	6.21	5.0E-59	A607484.1	EST_HUMAN	wh48c1.x1 Scares_NF_T_GBC_S1 Homo sapiens cDNA clone IMAGE:256839 3'
4055	14451	24237	5.85	5.0E-59	X35497.1	NT	H. sapiens DNA for ZNF80-linked ERV9 long terminal repeat
6173	15130	24550	7.46	5.0E-59	AW152034.1	EST_HUMAN	sa65007.x1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2781228 3' similar to contains element TARI regulatory element;
8278	17447	27962	1.71	5.0E-59	AV162989.1	EST_HUMAN	AV162989 MCS Homo sapiens cDNA clone MDSEIC12 5'
7976	18158	28390	2.6	5.0E-59	11434028	NT	Homo sapiens hypochlorin protein (LOC57143), mRNA
776	10705	20548	2.42	4.0E-59	P80008.1	NT	Human mRNA for KIA0184 gene, partial cds
4695	14571	24560	1.2	4.0E-59	45067258	NT	Homo sapiens tyrosinase receptor 3 (RYR3) mRNA

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Table 4

### Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4086	14571	24360	1.2	4.0E-50	4500758	NT	Homo sapiens ryanodine receptor 3 (RYR3) mRNA
9356	16556		2.16	4.0E-50	AF02720.1	NT	Homo sapiens T7-beta-hydroxylase/ dehydrogenase IV (HSD17B4) gene, promoter region and exon 1
9	9955		5.96	4.0E-50	AW095524.1	EST HUMAN	EST/37582 MAGE, resequences, MAGI Homo sapiens cDNA
221	10161	20002	4.12	3.0E-50	7602247	NT	Homo sapiens KIAA0060 gene product (KIAA0060), mRNA
1692	11584	21455	0.97	3.0E-50	4505600	NT	Homo sapiens plasminogen activator, tissue (PLATa) mRNA
1692	11584	21456	0.87	3.0E-50	4505600	NT	Homo sapiens plasminogen activator, tissue (PLATa) mRNA
2082	11972	21960	7.66	3.0E-50	AB020938.1	NT	Homo sapiens mRNA for KIAA1112 protein, partial cds
2082	11972	21961	7.68	3.0E-50	AB020938.1	NT	Homo sapiens mRNA for KIAA1112 protein, partial cds
3000	13017	22811	3.71	3.0E-50	4820314	NT	Homo sapiens A kinase (PKA) anchor protein 1 (AKAP1), mRNA
3000	13017	22812	3.71	3.0E-50	4820314	NT	Homo sapiens A kinase (PKA) anchor protein 1 (AKAP1), mRNA
3753	13658	23448	1.17	3.0E-50	4908044	NT	Homo sapiens zeta-pellicula glycoprotein 2 (zpmr) receptor (ZP2) mRNA
4683	14565	24366	1.07	3.0E-50	4795329	NT	Homo sapiens testis-specific Xc-related protein on Y (XCRP), mRNA
4734	14610	24406	1.86	3.0E-50	7427522	NT	Homo sapiens protein tyrosine phosphatase, receptor type, T (PTPRT), mRNA
5772	15079	25756	6.72	3.0E-50	8604074	NT	Homo sapiens hypothetical protein PRO7141 (PRO7141), mRNA
6352	16215	26377	1.82	3.0E-50	5454137	NT	Homo sapiens nuclear receptor corepressor 1 (NCOOR1), mRNA
6520	16509	26917	1.23	3.0E-50	X12556.1	NT	Human mRNA for the proto-oncogene
6523	16509	26968	1.65	3.0E-50	X12556.1	NT	Human mRNA for the proto-oncogene
9333	19014		1.84	3.0E-50	11471865	NT	Homo sapiens gamma-glutamyltransferase-like activity 1 (GGTLA1), mRNA
9474	19101		3.9	3.0E-50	11471865	NT	Homo sapiens gamma-glutamyltransferase-like activity 1 (GGTLA1), mRNA
7555	17066		5.01	2.0E-50	AA3007743	EST HUMAN	EST H00053 Jurkat T-cells V Homo sapiens cDNA 5' end
8003	17683		2.87	2.0E-50	BF365554.1	EST HUMAN	EST H00053 Jurkat T-cells V Homo sapiens cDNA 5' end
8205	18095	26341	1.84	2.0E-50	AW1410598.1	EST HUMAN	RCAN1 0098-100700-032-007 N10036 Homo sapiens cDNA
8205	18095	26342	1.84	2.0E-50	AW1410598.1	EST HUMAN	RCAN1 0098-100700-032-007 N10036 Homo sapiens cDNA
9235	16953	26556	5.14	2.0E-50	AB019080.1	EST HUMAN	W6306121 NC1_OGAP_KMT1 Homo sapiens cDNA clone IMAGE:226164.5
9750	19511	24977	2.75	2.0E-50	111645.1	NT	Q08542 RT1-VL-H-PROG, KMT1 Homo sapiens cDNA clone IMAGE:226164.5
157	10131		3.96	1.0E-50	B2584411.1	EST	Q08542 RT1-VL-H-PROG, KMT1 Homo sapiens cDNA clone IMAGE:226164.5
2575	12446		2.40	1.0E-50	AA748498.1	EST HUMAN	Q08542 RT1-VL-H-PROG, KMT1 Homo sapiens cDNA clone IMAGE:226164.5
5403	16322	26488	1.29	1.0E-50	AF130984.1	EST HUMAN	Q13837 MEK37 TRANSPOSABLE ELEMENT, COMPLETE CONSENSUS SEQUENCE
7400	17518	27524	1.72	1.0E-50	11416950	NT	Q13837 MEK37 TRANSPOSABLE ELEMENT, COMPLETE CONSENSUS SEQUENCE
8239	16322	26488	8.32	1.0E-50	AF130984.1	EST HUMAN	Homo sapiens zinc finger protein ZF75 (ZNF75), mRNA
1350	16322	26488	8.32	1.0E-50	AF130984.1	EST HUMAN	Homo sapiens zinc finger protein ZF75 (ZNF75), mRNA
1455	11350	21224	2.71	8.0E-02	47391459	NT	Homo sapiens small nuclear ribonucleoprotein D3 polypeptide 180D (SNRPD3) mRNA

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2126	12013	21911	2.7	8.0E-50	5174656	NT	Homo sapiens differentiation-related gene 1 (nickel-specific induction protein) (RTP) mRNA
2125	12013	21912	2.7	8.0E-50	5174656	NT	Homo sapiens differentiation-related gene 1 (nickel-specific induction protein) (RTP) mRNA
5840	16553	25946	1.41	8.0E-50	AB029004.1	NT	Homo sapiens mRNA for KIAA081 protein, partial cds
6844	16824	25718	2.6	8.0E-50	K11033.1	NT	Human mRNA for integrin alpha-2 subunit
7174	17051	27240	2.26	8.0E-50	11429549	NT	Homo sapiens S-antigen; retina and pineal gland (arrestin) (SAG), mRNA
7451	17260	27466	1.68	8.0E-50	11417118	NT	Homo sapiens KIAA0433 protein (KIAA0433), mRNA
8207	18051	28344	5.38	8.0E-50	AL163204.2	NT	Homo sapiens chromosome 21 segment HS21C004
8207	18051	28345	5.38	8.0E-50	AL163204.2	NT	Homo sapiens chromosome 21 segment HS21C004
737	10960	20504	8.69	7.0E-50	AF155055.1	NT	Homo sapiens MHC class 1 region
738	10960	20504	32.94	7.0E-50	AF155055.1	NT	Homo sapiens MHC class 1 region
708	10727	20567	1.15	7.0E-50	4604634	NT	Homo sapiens interleukin 10 receptor, beta (IL10RB), mRNA
2081	11971	21065	1.68	7.0E-50	AF077183.1	NT	Homo sapiens cullin 4A (CUL4A) mRNA, complete cds
4388	13868	23765	2.63	7.0E-50	4635488	NT	Homo sapiens onlinine deacetylase 1 (GDC1) mRNA
7412	17270	27488	3.28	7.0E-50	H63041.1	EST_HUMAN	Y1280.L1 Soares fetal liver spleen INTL3 Homo sapiens cDNA clone IMAGE:205887 5' similar to contains LTR5 repetitive element;
8871	18559	28543	1.90	7.0E-50	H63041.1	EST_HUMAN	Y1280.L1 Soares fetal liver spleen INTL3 Homo sapiens cDNA clone IMAGE:205887 5' similar to contains LTR5 repetitive element;
8614	18792		7.13	6.0E-50	H52458.1	EST_HUMAN	Y1280.L1 Soares fetal liver spleen INTL3 Homo sapiens cDNA clone IMAGE:201663 5' similar to contains OPR repetitive element;
78	10082	18678	1.94	5.0E-50	AB079471.1	EST_HUMAN	W55207.X1 Soares NF1_T_OBC.S1 Homo sapiens cDNA clone IMAGE:2356212 3'
79	10082	18679	1.94	5.0E-50	AB079471.1	EST_HUMAN	W55207.X1 Soares NF1_T_OBC.S1 Homo sapiens cDNA clone IMAGE:2356212 3'
2188	12075	21970	0.63	4.0E-50	AW503206.1	EST_HUMAN	UHFH-BNO-ak-q-07-c-UI1 NIH MGCC 50 Homo sapiens cDNA clone IMAGE:3078348 5'
2188	12075	21970	0.63	4.0E-50	AW503206.1	EST_HUMAN	UHFH-BNO-ak-q-07-c-UI1 NIH MGCC 50 Homo sapiens cDNA clone IMAGE:3078348 5'
2942	12869		1.12	4.0E-50	AA269037.1	EST_HUMAN	EST11468 Uterus Homo sapiens cDNA 5' end similar to similar to retrovirus-related pol
1815	11712	21591	4.86	3.0E-50	BE65281.1	EST_HUMAN	601336446F1 NIH MGCC 44 Homo sapiens cDNA clone IMAGE:3960395 5'
1815	11712	21592	4.86	3.0E-50	BE65281.1	EST_HUMAN	601336446F1 NIH MGCC 44 Homo sapiens cDNA clone IMAGE:3960395 5'
1826	11723		2.22	3.0E-50	6931190	EST	Homo sapiens profilin (PHB) mRNA
4354	14250	24035	2.08	3.0E-50	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region, segment 1/2
5463	15393	25443	2.09	3.0E-50	AB351996.1	EST_HUMAN	RC3.L1.T0023-200100-012-001 L1.T0023 Homo sapiens cDNA
8153	15111	24975	1.31	3.0E-50	A702914.1	EST_HUMAN	cd001146 NCL CGAP_K48 Homo sapiens cDNA clone IMAGE:1344083 5' similar to SW_UDP_MCUSE
6890	16775	23668	5.4	3.0E-50	5174644	NT	P92824 UNCLDNE PHOSPHORYLASE ;
6890	16775	23668	5.4	3.0E-50	5174644	NT	Homo sapiens proline dehydrogenase (proline oxidase) (PRODH) mRNA

Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6960	16967	27061	2.59	3.0E-60	AI040293.1	EST HUMAN	cc5db9b.91 Soares, NH-MPL, S1 Homo sapiens cDNA clone IMAGE:1690337 3' similar to SW FORM MOUSE C05960 FORMIN;
7077	16964	27147	4.7	3.0E-60	5174644	NT	Homo sapiens profile dehydrogenase (proline oxidase) (PRODH) mRNA
7596	17420	27837	3.84	3.0E-60	BF102612.1	EST HUMAN	601649227.F1 NH_MGC_80 Homo sapiens cDNA clone IMAGE:3930590 5'
28	10015	10610	1.79	2.0E-60	AY008265.1	NT	Homo sapiens soluble carrier (SLC25A18) mRNA, complete cds; nuclear gene for mitochondrial product
1405	11310	21171	2.86	2.0E-60	Z11094.1	NT	H1 sapiens 411Da protein kinase related to raf ERK2
16971	11563	21462	1.29	2.0E-60	N24603.1	NT	Human bot protein mRNA, 5' end
3839	13750	23433	0.78	2.0E-60	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
5010	15916	25941	1.57	2.0E-60	AF04877.1	NT	Homo sapiens pro-alpha 2(I) collagen (COL1A2) gene, complete cds
6063	15103	24680	2.44	2.0E-60	4503044	NT	Homo sapiens corticotroph releasing hormone receptor 2 (CRHR2) mRNA
6063	15103	24681	2.44	2.0E-60	4503044	NT	Homo sapiens corticotroph releasing hormone receptor 2 (CRHR2) mRNA
6063	15103	24681	2.44	2.0E-60	AA311159.1	EST HUMAN	EST181949 Jurkat T-cells V Homo sapiens cDNA 5' end similar to similar to prothymosin, alpha
6222	16983	26238	3.22	2.0E-60	AA311159.1	EST HUMAN	EST181949 Jurkat T-cells V Homo sapiens cDNA 5' end similar to similar to prothymosin, alpha
6222	16983	26238	3.22	2.0E-60	AA311159.1	EST HUMAN	EST181949 Jurkat T-cells V Homo sapiens cDNA 5' end similar to similar to prothymosin, alpha
7145	17023	27216	3.86	2.0E-60	36033.1	NT	Human pro-B cell stimulating factor homologous (SDP1D) mRNA, complete cds
7732	17892	27806	1.86	2.0E-60	11091659	NT	Homo sapiens serum coralin, transmembrane domain (TM), and cytoplasmic domain, (semaphorin) 6A (SEM46A) mRNA
7732	17892	27807	1.86	2.0E-60	11091659	NT	Homo sapiens serum coralin, transmembrane domain (TM), and cytoplasmic domain, (semaphorin) 6A (SEM46A) mRNA
9509	19123	28017	2.86	2.0E-60	11418152	NT	Homo sapiens non-Hisidine chromosome protein 2 (S. caecidialis) 1 (NHP2L1), mRNA
9539	19073		1.31	2.0E-60	AF08757.1	NT	Homo sapiens somatostatin receptor subunit 3 (SSTR3) gene, 5' flanking region and partial cds
9641	19036		1.48	2.0E-60	11418068	NT	Homo sapiens similar to HSP70/22 protein (H. sapiens) (LOC38350), mRNA
0669	15220	25169	1.47	2.0E-60	AB011800.1	NT	Homo sapiens gene for AF-6, complete cds
8957	19420	25169	1.47	2.0E-60	11418157	NT	Homo sapiens octalin channel, voltage-dependent, alpha 11 subunit (CACNA11), mRNA
611	10483	20764	1.56	1.0E-60	BE178566.1	EST HUMAN	PM3-H17005-270200-001-408 HT0003 Homo sapiens cDNA
3827	13736	23431	1.12	1.0E-60	AU143366.1	EST HUMAN	AU143369 Y79A1 Homo sapiens cDNA clone Y79A11001864 5'
4874	14754	24633	1.1	1.0E-60	AL103265.2	NT	Homo sapiens chromosome 21 segment HS210286
7086	16983		2.0	1.0E-60	AA304041.1	EST HUMAN	nc04e12.1 NCI_CGAP_P1 Homo sapiens cDNA clone IMAGE:1007182 similar to contains L1.1 L1
7101	16976	27170	1.56	1.0E-60	AV754081.1	EST HUMAN	repetitive element;
1083	10589	20340	1.9	9.0E-61	AU118944.1	EST HUMAN	AV754081 TP Homo sapiens cDNA clone TPAGE005 5'
2835	12502	22395	1.39	9.0E-61	AW009478.1	EST HUMAN	AU118344 HEMBA1 Homo sapiens cDNA clone HEMBA1005583 5'
2835	12502	22396	1.39	9.0E-61	AW009478.1	EST HUMAN	w085b10.1 NCI_CGAP_C03 Homo sapiens cDNA clone IMAGE:2505665 5'
2835	12502	22396	1.39	9.0E-61	AW009478.1	EST HUMAN	w085b10.1 NCI_CGAP_C03 Homo sapiens cDNA clone IMAGE:2505665 5'
2921	12946		1.74	6.0E-61	X57147.1	NT	Human endogenous retrovirus pHE-1 (ERV9)



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Table 4.

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) BLAST E-Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
122	10098	19918	0.94	7.0E-41	770670	NT	Homo sapiens PXR2b protein (PXR2b), mRNA
123	10098	19919	0.94	7.0E-41	770670	NT	Homo sapiens PXR2b protein (PXR2b), mRNA
123	10098	19918	0.86	7.0E-41	770670	NT	Homo sapiens PXR2b protein (PXR2b), mRNA
123	10098	19919	0.86	7.0E-41	770670	NT	Homo sapiens PXR2b protein (PXR2b), mRNA
265	10200	20045	2	6.0E-41	BE409310.1	EST	HUMAN
794	10723	20854	1.59	6.0E-41	BE409310.1	EST	HUMAN
1296	11206	21060	10.28	8.0E-41	AF119893.1	NT	Homo sapiens PRO2014 mRNA, complete cds
1812	11516	21376	0.95	6.0E-41	BE257400.1	EST	HUMAN
1828	11522	21392	2.12	6.0E-41	AA560383.1	EST	HUMAN
3266	13189	22997	8.10	6.0E-41	AU130489.1	EST	HUMAN
5574	15633	25884	2.92	6.0E-41	576248.1	NT	ig-beta/IG-CD78 (alternatively spliced) [human, B cells, mRNA Partial, 375 nt]
6344	16207	26370	1.98	6.0E-41	U24498.1	NT	Homo sapiens autocalcin (alternatively spliced) kidney disease protein 1 (PKD1) gene
84923	18365	26872	2.03	6.0E-41	AF035727.1	NT	Homo sapiens general transcription factor 24 (GTF2) mRNA, complete cds
9472	10723	20864	1.43	6.0E-41	BE409310.1	EST	HUMAN
1655	11658	21421	1.75	6.0E-41	4536008	NT	Homo sapiens protein phosphatase 1, regulatory subunit 1 (PPP1R10) mRNA
3000	12023	22720	1.32	6.0E-41	AL163276.2	NT	Homo sapiens cytochrome P-450 2C9 (HSA2C9) mRNA
3114	13089	22835	0.84	5.0E-41	AF020321.1	NT	Homo sapiens mRNA for KIAA0425 protein, partial cds
3161	13086	22890	1.9	5.0E-41	4502166	NT	Homo sapiens amyloid beta (A4) precursor protein (probable isoform), Alzheimer disease (APP), mRNA
3899	13800		1.68	5.0E-41	AJ23941.1	NT	Homo sapiens 959 kb contig between AML1 and CBR1 on chromosome 21Q22 segment 1/3
6213	18841		2.76	4.0E-41	AY731140.1	EST	HUMAN
4719	14016	23797	1.13	3.0E-41	BE396276.1	EST	HUMAN
480	10433	20240	1.5	2.0E-41	8622828	NT	Homo sapiens hypothetical protein FLJ11028 (FLJ11028), mRNA
1184	11104	20240	1.35	2.0E-41	BE169410.1	EST	HUMAN
1184	11104	20951	1.35	2.0E-41	BE169410.1	EST	HUMAN
1642	11646	21407	1.31	2.0E-41	NS3009.1	EST	HUMAN
2106	11668	21897	1.41	2.0E-41	4768003	NT	HUMAN
2304	12472		1.16	2.0E-41	N30397.1	EST	HUMAN
5871	15177	25896	1.7	2.0E-41	11426169	NT	Homo sapiens ATPase, H+ transporting, vesicular (vacuolar proton pump) non-catalytic accessory protein
7212	17089	22779	1.33	2.0E-41	AY604317.1	EST	HUMAN
7707	17557	27783	1.82	2.0E-41	AW500268.1	EST	HUMAN
7885	17155	27679	3.09	2.0E-41	11421778	NT	Homo sapiens polynucleotide (RNA) III (DNA directed) (580d) (RPC39), mRNA

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6258	18138		7.14	2.0E-61	11416729	NT	Homo sapiens ribosomal protein L44 (RPL44), mRNA
428	10373		0.86	1.0E-61	AL103203.2	NT	Homo sapiens chromosome 21 segment HS210003
750	10690	20524	1.32	1.0E-61	5438329	NT	Homo sapiens origin recognition complex, subunit 2 (yeast homolog)-like (ORCL2), mRNA
1371	11283	21138	1.30	1.0E-61	AL163203.2	NT	Homo sapiens chromosome 21 segment HS210003
1731	11632		0.97	1.0E-61	U32657.1	NT	Human polymorphic fructokinase repeat in X-linked retinitis pigmentosa (RP3) gene region
1814	11711	21590	4.47	1.0E-61	6005683	NT	Homo sapiens zona pellucida glycoprotein 3A (sperm receptor) (ZP3A), mRNA
2150	12038	21935	1.49	1.0E-61	AW627261.1	EST_HUMAN	xx11b66.y1 NCI CGAP_L6 Homo sapiens cDNA clone IMAGE:2893369 5' similar to contains element
2804	12734	22533	1.57	1.0E-61	BE386353.1	EST_HUMAN	MSR1 repetitive element ;
3330	13250	23015	0.86	1.0E-61	7662319	NT	60127351F1 NH_MGC_20 Homo sapiens cDNA clone IMAGE:3314607 5'
3671	13365	23372	1.47	1.0E-61	BE174455.1	EST_HUMAN	Homo sapiens KIAA0806 gene product (KIA0806), mRNA
4336	14238	24418	0.95	1.0E-61	4756249	NT	QVZ5HT0877.140300.017-g08 HT0577 Homo sapiens cDNA
4336	14238	24420	0.94	1.0E-61	4756249	NT	Homo sapiens TRAF family member-associated NFKB activator (TANK) mRNA
4761	14638	24622	7.63	1.0E-61	AW268181.1	EST_HUMAN	Homo sapiens cDNA clone IMAGE:2732871 3'
4761	14638	24623	7.63	1.0E-61	AW268181.1	EST_HUMAN	UHLBW0-018-0-0-11 at NCI CGAP_S406 Homo sapiens cDNA clone IMAGE:2732871 3'
4878	14769	24965	0.86	1.0E-61	AL163210.2	NT	UHLBW0-018-0-0-11 at NCI CGAP_S406 Homo sapiens cDNA clone IMAGE:2732871 3'
6124	15071	25107	7.19	1.0E-61	M02193.1	NT	Homo sapiens chromosome 21 segment HS210010
6260	16133	25287	1.4	1.0E-61	6923130	NT	Human P40 T-cell and mast cell growth factor (HP40) gene, complete cds
6260	16133	25288	1.4	1.0E-61	6923130	NT	Homo sapiens hypothetical protein FL20128 (FL20128), mRNA
6720	16500	25600	3.38	1.0E-61	11034840	NT	Homo sapiens growth hormone releasing hormone (GHRH), mRNA
6858	16717	26610	3.99	1.0E-61	AF24696.1	NT	Homo sapiens marnadiase, beta A, lysosomal (MANSA) gene, and ubiquitin-conjugating enzyme E2D 3 (UBE2D3) genes, complete cds
7348	17216		2.76	1.0E-61	AW059726.1	EST_HUMAN	NR0-BN0070-04000-010-001 BN0070 Homo sapiens cDNA
7703	17613	27540	6.28	1.0E-61	11429682	NT	Homo sapiens KIAA06971 protein (KIA06971), mRNA
7703	17623	28169	1.89	1.0E-61	11429678	NT	Homo sapiens actinin, alpha 4 (ACTN4), mRNA
8011	19631		1.26	1.0E-61	AB011306.1	NT	Homo sapiens gene for AF-6, complete cds
9149	19620	25002	2.86	1.0E-61	11430400	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
9149	19620	25003	2.86	1.0E-61	11430400	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
9515	19128	25261	1.8	1.0E-61	M20806.1	NT	Human kappa-immunoglobulin germline pseudogene (Chr1) variable region (subgroup V kappa 1)
9905	19317	25205	8.25	1.0E-61	11418127	NT	Homo sapiens GTP-binding protein 1 (GTPBP1), mRNA
4451	14345	24138	0.79	8.0E-62	AA80420.1	EST_HUMAN	cc06011 at NCI CGAP_G031 Homo sapiens cDNA clone IMAGE:1354725 3' similar to SWI_PQI_MLVRK
9553	19417		1.56	8.0E-62	AA768861.1	EST_HUMAN	nc75901 at NCI CGAP_G031 Homo sapiens cDNA clone IMAGE:1301329 3'
1091	11007	20648	1.27	7.0E-62	AV174334.1	EST_HUMAN	AV174334 DGB Homo sapiens cDNA clone DGBANA08 5'

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Description
3462	13378	23184	0.79	7.0E-62	P17480	SWISSPROT	NUCLEOLAR TRANSCRIPTION FACTOR 1 (LPS TREM BINDING FACTOR 1) (UBF-1) (AUTONITROGEN NIK-90)
8957	18546	28829	4	7.0E-62	A00891.1	EST HUMAN	g55604.x1 Soares, testis, NHT Homo sapiens cDNA clone IMAGE:1839160 3' similar to FRO15103
2609	12866			9.0E-62	U04991.1	NT	O15103 HYPOTHETICAL 27.3 KO PROTEIN. ;
3338	13258		3.93	6.0E-62	11418266	NT	Human zinc finger protein ZNF131 mRNA, partial cds
6496	18355	26524	3.33	6.0E-62	A1762801.1	EST HUMAN	Homo sapiens CGI-56 protein (CGI-56), mRNA
6496	18355	26525	3.33	6.0E-62	A1762801.1	EST HUMAN	wf04602.x1 NCI_CGAP CLL1 Homo sapiens cDNA clone IMAGE:2389257 3'
6904	18953	26973	1.4	6.0E-62	11431135	EST HUMAN	wf04602.x1 NCI_CGAP CLL1 Homo sapiens cDNA clone IMAGE:2389257 3'
7386	17255	27460	2.76	6.0E-62	AW1814393.1	EST HUMAN	Homo sapiens CGI-18 protein (LOC51009), mRNA
410	10356	20183	1.49	5.0E-62	A150528.1	EST HUMAN	MF3-ST0203-130100-025-469 ST0203 Homo sapiens cDNA
2366	12286	22132	3.26	5.0E-62	AJ27735.1	NT	w611607.x1 NCI_CGAP LU08 Homo sapiens cDNA clone IMAGE:2647204 3' similar to SW:GG55_HUMAN
2356	12236	22133	3.26	5.0E-62	AJ27735.1	NT	Q08379 GOLGIN-95, contains element MER22 repetitive element ;
3372	13391	23090	2.17	5.0E-62	4569758	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
4233	14131	23607	1.95	5.0E-62	AA431093.1	EST HUMAN	Homo sapiens yamotone receptor 3 (RYR3) mRNA
7462	17352	27556	6.17	5.0E-62	AW140697.1	EST HUMAN	3p78609.x1 Soares, testis, NHT Homo sapiens cDNA clone IMAGE:762344 3' similar to SW:NROG_RAT
5857	18455	26723	4.91	5.0E-62	11426574	NT	P47245 NARPL YSIN ;
8187	18455	26724	4.91	5.0E-62	11426574	NT	w67068.x1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:2361616 5'
822	10750	20857	3.47	4.0E-62	AW161479.1	EST HUMAN	Homo sapiens muscle specific gamma (Ms) mRNA
822	10750	27598	3.47	4.0E-62	AW161479.1	EST HUMAN	Homo sapiens muscle specific gamma (Ms) mRNA
823	10750	20857	4.85	4.0E-62	AW161479.1	EST HUMAN	Homo sapiens muscle specific gamma (Ms) mRNA
823	10750	20988	4.85	4.0E-62	AW161479.1	EST HUMAN	ATP SYNTHASE COUPLING FACTOR 6, MITOCHONDRIAL PRECURSOR (HUMAN);
1446	11351		0.86	4.0E-62	AJ331281.1	EST HUMAN	ATP SYNTHASE COUPLING FACTOR 6, MITOCHONDRIAL PRECURSOR (HUMAN);
2409	12286	22183	1.39	4.0E-62	A827000.1	EST HUMAN	ATP SYNTHASE COUPLING FACTOR 6, MITOCHONDRIAL PRECURSOR (HUMAN);
2409	12286	22184	1.39	4.0E-62	A827000.1	EST HUMAN	ATP SYNTHASE COUPLING FACTOR 6, MITOCHONDRIAL PRECURSOR (HUMAN);
3393	13273		0.6	4.0E-62	4557687	NT	wf12608.x1 Soares, testis, NHT Homo sapiens cDNA clone IMAGE:2360959 3' similar to
							wf12608.x1 Soares, testis, NHT Homo sapiens cDNA clone IMAGE:2360959 3' similar to
							g557138.mmt HISTONE H2B.2 (HUMAN);
							Homo sapiens keratin 18 (KRT18) mRNA

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Table 4  
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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4947	14824		2.03	4.0E-62	AJ243218.1	NT	Homo sapiens partial CH-1 receptor gene, exons 2 to 6
5609	19524	29606	1.66	4.0E-62	4906978	NT	Homo sapiens solute carrier family 13 (sodium-dependent dicarboxylate transporter), member 2 (SLC13A2) mRNA
5804	19709	29622	2.42	4.0E-62	11420654	NT	Homo sapiens ubiquitin specific protease 9, X chromosome (Diophylla fat facets related) (USP9X), mRNA
6254	16120	26273	1.66	4.0E-62	11421041	NT	Homo sapiens phosphoribosyl pyrophosphate synthetase 2 (PRPS2), mRNA
6468	16357	26528	2.21	4.0E-62	7657067	NT	Homo sapiens eukaryotic translation initiation factor 2B, subunit 2 (beta, 39kD) (EIF2B2), mRNA
6468	16357	26529	2.21	4.0E-62	7657067	NT	Homo sapiens eukaryotic translation initiation factor 2B, subunit 2 (beta, 39kD) (EIF2B2), mRNA
7134	17011	27204	6.3	4.0E-62	AB033089.1	NT	Homo sapiens mRNA for KIAA1253 protein, partial cds
8377	18264	29650	2.43	4.0E-62	Z78766.1	NT	H. sapiens flow-sorted chromosome 6 HindIII fragment, S. Ospa19D3
9135	19391	29762	2.43	4.0E-62	Z78766.1	NT	H. sapiens flow-sorted chromosome 6 HindIII fragment, S. Ospa19D3
9355	19578	29792	2.95	4.0E-62	11418096	NT	Homo sapiens putative nuclear protein (HRHFB2)223, mRNA
9749	18305	26201	1.99	4.0E-62	11418162	NT	Homo sapiens non-beta chromosome protein 2 (S. cerevisiae-like) 1 (NHEP2L1), mRNA
9792	18302	26198	4.2	4.0E-62	11418323	NT	Homo sapiens cadherin, EGF-LAG seven-pass 5-type receptor 1 (CELSR1), mRNA
9792	18302	26199	4.2	4.0E-62	11417862	NT	Homo sapiens cadherin binding protein 1 (KIAA0330), mRNA
9835	18336	26210	1.57	4.0E-62	11420460	NT	Homo sapiens calmodulin binding protein 1 (KIAA0330), mRNA
98	10053	16868	1.12	3.0E-62	4557794	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
3008	12388	27228	0.93	3.0E-62	AB043036.1	NT	Homo sapiens transferrin 2 (bilateral acoustic neuroma) (NF2), mRNA
3008	12398	27229	0.95	3.0E-62	AB043036.1	NT	Homo sapiens mRNA for KIAA1476 protein, partial cds
3540	13554	28340	1.92	3.0E-62	X62688.1	NT	Homo sapiens mRNA for KIAA1476 protein, partial cds
							Human cyclophilin-related processed pseudogene
6966	16846	27038	4.36	3.0E-62	A163273.1	EST HUMAN	W63043.1 NC1_CGAP_1K411 Homo sapiens cDNA clone IMAGE:259803 3' similar to contains THR12 THR repetitive element;
1271	11120	20669	1.5	2.0E-62	A163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
7096	16073	27165	4.8	2.0E-62	BF33591.1	EST HUMAN	RCB-BN0284-300900-031-c05 BN0284 Homo sapiens cDNA
7096	16073	27166	4.8	2.0E-62	BF33591.1	EST HUMAN	RCB-BN0284-300900-031-c05 BN0284 Homo sapiens cDNA
7946	17696		3.94	2.0E-62	AF224666.1	NT	Homo sapiens mannosidosis, beta A, lysosomal (MANBA) gene and ubiquitin-conjugating enzyme E2D 3 (UBE2D) genes, complete cds
8935	18744		8.93	2.0E-62	BF330676.1	EST HUMAN	QV4-BT0257-081199-017-403 BT0257 Homo sapiens cDNA
1026	10046	20791	1.24	1.0E-62	AF248540.1	NT	Homo sapiens intersectin 2 (SHSD1B) mRNA, complete cds
1526	11431	21288	6.83	1.0E-62	L78810.1	NT	Homo sapiens ADP/ATP carrier protein (ANT-2) gene, complete cds
1758	11657	21528	1.02	1.0E-62	AA625207.1	EST HUMAN	af7914.1 L7 Sources: NHMIPU_S1 Homo sapiens cDNA clone IMAGE:1047404 5' similar to WP_K01112.1 CE03463
2841	12811	22905	1.12	1.0E-62	AB030441.1	EST HUMAN	DKFZ566F104.1 565 (synonym: hnf4d) Homo sapiens cDNA clone DKFZ566F104.5

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Table 4  
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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) HT BLAST E Value	Top HT Accession No.	Top HT Database Source	Top HT Descriptor
4426	14321	24108	1.32	1.0E-62	8923201	NT	Homo sapiens hypophyseal protein FLJ20212 (FLJ20212), mRNA
6236	18102	26251	2.17	1.0E-42	AA72878.1	EST HUMAN	3g89f0.4f Soares, fetal heart, NHHT19W Homo sapiens cDNA clone IMAGE:409771 3'
6236	18102	26252	2.17	1.0E-42	AA72878.1	EST HUMAN	3g89f0.4f Soares, fetal heart, NHHT19W Homo sapiens cDNA clone IMAGE:409771 3'
7239	17116	27310	1.53	1.0E-42	7692280	NT	Homo sapiens KIA00763 gene product (KIA00763), mRNA
7239	17116	27311	1.53	1.0E-42	7692280	NT	Homo sapiens KIA00763 gene product (KIA00763), mRNA
7262	17139	27331	1.81	1.0E-42	K15533.1	NT	H-sapiens lysosomal acid phosphatase gene (EG 3.1.3.2) Exon 9
7262	17139	27332	1.81	1.0E-42	K15533.1	NT	H-sapiens lysosomal acid phosphatase gene (EG 3.1.3.2) Exon 9
7512	17300	27607	2.81	1.0E-42	AA49531.0	EST HUMAN	aa53108.1 NCI CGAP GC81 Homo sapiens cDNA clone IMAGE:815656 3'
8973	18501	28845	2.13	1.0E-42	Z78958.1	NT	H-sapiens flow-sorted chromosome 6 HindIII fragment, SC16A1408
9823	19109	28208	1.94	1.0E-42	Z78958.1	NT	Homo sapiens cathenin EGF LAG serine-protein G-gate receptor 1 (CELSR1), mRNA
9815	19322	28208	2.3	1.0E-42	11418322	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
335	10294	20109	2.14	9.0E-63	AW18405.1	EST HUMAN	OV4-5T0234-181169-037.456 ST0234 Homo sapiens cDNA
2207	12170	20109	1.81	9.0E-63	C18180.1	EST HUMAN	C18180 Human placenta cDNA (T761444) Homo sapiens cDNA, clone GEN-556C10 5'
3065	10953	20638	7.42	8.0E-63	AB002348.2	NT	Homo sapiens mRNA for KIA0359 protein, partial cds
3065	10953	20639	7.42	8.0E-63	AB002348.2	NT	Homo sapiens mRNA for KIA0359 protein, partial cds
8210	10368	20103	6.51	8.0E-63	11418188	NT	Homo sapiens scutellaria 2, mitochondrial (AC02), mRNA
3354	10274	22104	1.31	9.0E-63	Y15098.1	NT	Homo sapiens mRNA for F103 kinase
6262	10127	26261	4.39	9.0E-63	11426865	NT	Homo sapiens nucleoporin 880 (NUP88), mRNA
6946	10724	26917	1.37	9.0E-63	11427100	NT	Homo sapiens Ras association (RAGOS) (RAF-6) domain family 2 (RASRF2), mRNA
2206	12178	22077	1.52	8.0E-63	4697734	NT	Homo sapiens monooxygenase A (MAOA), nuclear gene encoding mitochondrial protein, mRNA
2522	12203	22102	2.17	8.0E-63	5031810	NT	Homo sapiens L2-inducible T-cell kinase (ITK), mRNA
3415	13332	22134	3.81	8.0E-63	AF108346.1	NT	Gallus gallus Dactyl protein (Dactyl), complete cds
3415	13332	22135	3.81	8.0E-63	AF108346.1	NT	Gallus gallus Dactyl protein (Dactyl), complete cds
4168	14098	23843	3.37	8.0E-63	AL163206.2	NT	Homo sapiens chromosome 21 segment HS21C098
913	10837		1.78	7.0E-43	AB172137.1	EST HUMAN	hm56501.1 x1 NCI CGAP U12 Homo sapiens cDNA, clone IMAGE:2459008 3'
5274	18198		40.61	6.0E-63	AA420803.1	EST HUMAN	nc83012.1 NCI CGAP J11 Homo sapiens cDNA, clone IMAGE:745947 similar to ghY00391 605
3279	13200	22001	0.98	4.0E-63	AL163278.2	NT	RIBOSOMAL PROTEIN (HUMAN);
5879	15795	25905	2.86	4.0E-63	AW170372.1	EST HUMAN	Homo sapiens chromosome 21 segment HS21C078
5879	15795	25905	2.86	4.0E-63	AW170372.1	EST HUMAN	CNA-BT0965-190100-072-269 BT0595 Homo sapiens cDNA
8474	18347	29811	2	4.0E-63	AW134700.1	EST HUMAN	U1-HB1-40q-a-02-Q1.1 at NCI CGAP SL13 Homo sapiens cDNA
8474	18347	29812	2	4.0E-63	AW134700.1	EST HUMAN	U1-HB1-40q-a-02-Q1.1 at NCI CGAP SL13 Homo sapiens cDNA
1893	11788	21096	1.97	3.9E-63	AB010380.1	NT	Homo sapiens mRNA for KIA00717 protein, partial cds

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Table 4

### Single Exon Probes Expressed in Heart

[illegible]

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar Top Hit Database BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4246	14148	23910	2.91	1.0E-03	F08488.1	EST_HUMAN	HSC2VDH11 normalized infant brain cDNA Homo sapiens cDNA clone c-zd11
5526	15443	25009	1.39	1.0E-03	AW082266.1	EST_HUMAN	Homo sapiens chromosome 10 segment ST0216 Homo sapiens cDNA
6353	16813		2.3	1.0E-03	AL163247.2	NT	Homo sapiens chromosome 21 segment HS21C047
6979	19633		3.02	1.0E-03	AL163207.2	NT	Homo sapiens chromosome 21 segment HS21C007
6951	16471	20961	4.78	9.0E-04	AI178160.1	EST_HUMAN	tn95b07.x1 NCI_CGAP_Kid1 Homo sapiens cDNA clone IMAGE:2161526 3'
1030	10948		7.80	8.0E-04	BE280766.1	EST_HUMAN	601156232FT NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3139336 5'
5733	15841	25747	3.16	8.0E-04	BE86755.1	EST_HUMAN	601508598FT NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3910336 5'
8059	18941		2.61	8.0E-04	11418177	NT	Homo sapiens Ren GFPase activating protein 1 (RANGAP1), mRNA
9111	18978		2.56	8.0E-04	T00451.1	EST_HUMAN	W69802.1 Stralagene lung (6937210) Homo sapiens cDNA clone IMAGE:76179 5'
3465	13402		0.90	7.0E-04	BE394321.1	EST_HUMAN	601311450FT NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3653204 5'
4625	14513	24303	2.44	7.0E-04	4507460	NT	Homo sapiens thymidylate synthase 1 (THOP1), mRNA
4625	14513	24304	2.44	7.0E-04	4507460	NT	Homo sapiens thymidylate synthase 1 (THOP1), mRNA
7768	17916	27844	2.13	7.0E-04	Y07846.1	NT	Homo sapiens EWS, gair2, m22 and bcr22 genes
6892	11954	21463	1.7	8.0E-04	A0851992.1	EST_HUMAN	W651407.x1 NCI_CGAP_G06 Homo sapiens cDNA clone IMAGE:2309220 3' similar to gb-M1516162 BE7A-
6892	11954	21464	1.7	8.0E-04	A0851992.1	EST_HUMAN	GLUCURONIDASE PRECURSOR (HUMAN);
3084	13011	22891	3.7	8.0E-04	W1028445.1	EST_HUMAN	W651407.x1 NCI_CGAP_G06 Homo sapiens cDNA clone IMAGE:2309220 3' similar to gb-M1516162 BE7A-
3084	13011	22892	3.7	8.0E-04	W1028445.1	EST_HUMAN	GLUCURONIDASE PRECURSOR (HUMAN);
5454	15573	25433	2.64	8.0E-04	Y16933.1	NT	W153603.x1 NCI_CGAP_Bn23 Homo sapiens cDNA clone IMAGE:2526438 3'
5454	15573	25434	2.64	8.0E-04	Y16933.1	NT	W153603.x1 NCI_CGAP_Bn23 Homo sapiens cDNA clone IMAGE:2526438 3'
6293	16157	26512	2.80	8.0E-04	M13975.1	NT	Homo sapiens MCP-1 gene and enhancer region
6293	16157	26513	2.80	8.0E-04	M13975.1	NT	Homo sapiens MCP-1 gene and enhancer region
7379	17245	27451	7.8	8.0E-04	AF274783.1	NT	Homo sapiens mesenchyme homeo box 1 (MEOX1), mRNA
7472	17532	27458	2.06	8.0E-04	AF274783.1	NT	Homo sapiens mesenchyme homeo box 1 (MEOX1), mRNA
7604	17450	27669	2.34	8.0E-04	AF274783.1	NT	Homo sapiens acyl-CoA synthetase (LOC585902), mRNA
8151	18039	28287	7.57	8.0E-04	11420107	NT	Homo sapiens progressive encephalopathy-like protein (ANK1), complete cds
8151	18039	28288	7.57	8.0E-04	11420107	NT	ANK1 (human, brain, mRNA, 2716 nt)
9262	18957	25521	4.09	8.0E-04	115205198	NT	Homo sapiens atrial natriuretic factor 3 (STAG3), mRNA
803	10732	20874	2.44	8.0E-04	AF231919.1	NT	Homo sapiens atrial natriuretic factor 3 (STAG3), mRNA
803	10732	20875	2.44	8.0E-04	AF231919.1	NT	Homo sapiens atrial natriuretic factor 3 (STAG3), mRNA
1402	1307	21167	2.42	8.0E-04	U09333.1	NT	Homo sapiens phosphoglucomutase-related protein (PGMR2), complete cds
1402	1307	21168	2.42	8.0E-04	U09333.1	NT	Homo sapiens phosphoglucomutase-related protein (PGMR2), complete cds

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Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1683	11685	21497	1.97	5.0E-64	U8938.1	NT	Human I301 protein homolog mRNA, complete cds
2795	11370	21235	2.66	5.0E-64	7652206	NT	Homo sapiens KIAA0018 gene product (KIAA0018), mRNA
2795	11370	21235	2.66	5.0E-64	7652206	NT	Homo sapiens KIAA0018 gene product (KIAA0018), mRNA
3876	13787	23575	5.61	3.0E-64	AF017433.1	NT	Homo sapiens putative transcription factor CR53 (CR53) mRNA, partial cds
8188	18074	26324	3.9	4.0E-64	AF183783.1	EST HUMAN	RC3-ST10717-120200-018-a03 ST10717 Homo sapiens cDNA
8188	18074	26324	3.9	4.0E-64	AF183783.1	EST HUMAN	RC3-ST10717-120200-018-a03 ST10717 Homo sapiens cDNA
2151	12039	21935	3.85	3.0E-64	U8905.1	EST HUMAN	C18965 Human placenta cDNA (TFujwara) Homo sapiens cDNA clone GEN-595602.5
3219	13140	22943	0.95	3.0E-64	BE764391.1	EST HUMAN	601559555F1 NIH JM6C. 7 Homo sapiens cDNA clone IMAGE324357.5
3396	13313	23112	1.51	3.0E-64	AF17174.1	EST HUMAN	AV17174 DCA Homo sapiens cDNA clone DCAAMC01.5
3396	13313	23113	1.51	3.0E-64	AF17174.1	EST HUMAN	AV17174 DCA Homo sapiens cDNA clone DCAAMC01.5
5703	15911	25719	1.34	3.0E-64	B137000.1	EST HUMAN	RC3-FN019-200900-011-G11 FN0019 Homo sapiens cDNA
5911	15817	25642	3.39	3.0E-64	B137000.1	EST HUMAN	Homo sapiens alpha matrix protein GN130 (GOLGA2) mRNA, complete cds
6933	15811	27005	1.81	3.0E-64	AF24953.1	NT	Homo sapiens alpha matrix protein GN130 (GOLGA2) mRNA, complete cds
6933	15811	27006	1.81	3.0E-64	AF24953.1	NT	Homo sapiens alpha matrix protein GN130 (GOLGA2) mRNA, complete cds
6946	16824	27016	1.3	3.0E-64	BE20852.1	EST HUMAN	3672912.1 NIH JM6C. 13 Homo sapiens cDNA clone IMAGE3047975.5 similar to gh1.08069 DNAJ
6946	16824	27017	1.3	3.0E-64	BE20852.1	EST HUMAN	3672912.1 NIH JM6C. 12 Homo sapiens cDNA clone IMAGE3047975.5 similar to gh1.08069 DNAJ
7422	17289	27497	1.26	3.0E-64	AL163246.2	NT	PROTEIN HOMOLOG 2 (HUMAN);
7422	17289	27498	1.26	3.0E-64	AL163246.2	NT	PROTEIN HOMOLOG 2 (HUMAN);
8595	18434	28703	1.76	3.0E-64	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
8595	18434	28704	1.76	3.0E-64	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
8595	18746	29040	4.59	3.0E-64	AL163277.2	NT	Homo sapiens chromosome 21 segment HS21C027
1072	10688	20831	0.94	2.0E-64	AA009940.1	EST HUMAN	af00408.1 Soares, Islets, NIH Homo sapiens cDNA clone IMAGE11031167.3
1370	11282	21137	1.32	2.0E-64	4757701	NT	Homo sapiens alphaF2-like cap-binding protein (4EHP) mRNA
2478	12354	22252	1.78	2.0E-64	AB27030.1	EST HUMAN	w67601.1 NIG CGAP Kd11 Homo sapiens cDNA clone IMAGE2462281.3 similar to contains element L1 repetitive element;
2484	12359	22253	3.03	2.0E-64	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
2484	12359	22253	3.03	2.0E-64	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
3101	13027	22823	2.66	2.0E-64	4504038	EST HUMAN	Homo sapiens glutamate-oxaloacetate transaminase 2, mitochondrial (aspartate aminotransferase 2) (GOT2), nuclear gene encoding mitochondrial protein, mRNA
3719	13631	23416	1.33	2.0E-64	AF1698145.1	EST HUMAN	ES1370215 IMAGE ressequencing, IMAGE Homo sapiens cDNA
3719	13631	23417	1.33	2.0E-64	AF1698146.1	EST HUMAN	ES1370215 IMAGE ressequencing, IMAGE Homo sapiens cDNA
5953	15595	25962	2.62	2.0E-64	AU124397.1	EST HUMAN	AU124397 NT2RM2 Homo sapiens cDNA clone NT2RM2002113.5



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## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5783	16689	25799	1.3	2.0E-64	AF113708.1	NT	Homo sapiens angiotensin II (ANG4) mRNA, partial cds
5908	18812	25938	4.97	2.0E-64	BF068537.1	EST_HUMAN	002123474P NIH_MGC_59 Homo sapiens cDNA clone IMAGE:280395 5'
5976	18880	26004	1.31	2.0E-64	AD70387.1	EST_HUMAN	0259603.x1 Scores, total, fetus, N22HF8, 5w Homo sapiens cDNA clone IMAGE:187677 3'
6024	16028	26060	3.85	2.0E-64	M71185.1	NT	Homo sapiens dopamine receptor D5 pseudogene 1, partial cds
8144	18032	28279	2.85	2.0E-64	BF029114.1	EST_HUMAN	002042852F NCI_CGAP_Bms7 Homo sapiens cDNA clone IMAGE:4180556 5'
8406	18282	28534	6.4	2.0E-64	AI022911.1	EST_HUMAN	wn81005.x1 NCI_CGAP_U1 Homo sapiens cDNA clone IMAGE:2482211 3'
8406	18282	28534	6.4	2.0E-64	AI022911.1	EST_HUMAN	wn81005.x1 NCI_CGAP_U1 Homo sapiens cDNA clone IMAGE:2482211 3'
9182	18921	28347	1.73	2.0E-64	8567387	NT	Homo sapiens period (Drosophila) homolog 3 (PER3), mRNA
9617	19195		2.68	2.0E-64	HS1932.1	EST_HUMAN	CHR20:01 Chromosome 22, span Homo sapiens cDNA clone C22_132 5'
268	10224	20039	1.74	1.0E-64	AF231919.1	NT	Homo sapiens chromosome 21, unknown mRNA
1740	11641	21508	5.88	1.0E-64	AI026419.1	EST_HUMAN	sa08091.x1 Schwabe fetal brain 00004 Homo sapiens cDNA clone IMAGE:2619136 3' similar to p6124696_cds1 PROTHYROSIN ALPHA (HUMAN) contains element MSRI repetitive element.
3466	13382	23188	5.61	1.0E-64	AF108779.1	NT	Homo sapiens transcription factor GHM, intron 3, JH11 protein, JH4 protein, JH6 protein, T54 protein, JH10 protein, A4 differentiation-dependent protein, triple LIM domain protein 6, and synaptophysin genes, complete cds, 4-type calcium channel 4p
3526	13452	23248	1.32	1.0E-64	AF22857.1	NT	Homo sapiens TRIO3 mRNA, partial cds
3536	13452	23248	1.32	1.0E-64	AF22857.1	NT	Homo sapiens TRIO3 mRNA, partial cds
9154	18924	22017	1.62	1.0E-64	AI16246.2	NT	Homo sapiens chromosome 21 segment HS21046
2230	12115	22018	0.93	8.0E-65	X89211.1	NT	H.sapiens DNA for endogenous retroviral like element
2230	12115	22018	0.93	8.0E-65	X89211.1	NT	H.sapiens DNA for endogenous retroviral like element
8522	18935		15.1	9.0E-65	BF330976.1	EST_HUMAN	QV4-BT0257-081199-017-403 BT0257 Homo sapiens cDNA
8769	18613	25803	10.88	8.0E-65	AI026944.1	EST_HUMAN	sa08097.x1 Schwabe fetal brain 00004 Homo sapiens cDNA clone IMAGE:2610005 3' similar to SW_RL21_HUMAN P46776 608 RIBOSOMAL PROTEIN L21 ;
7841	17691	27936	2.05	7.0E-65	BE091063.1	EST_HUMAN	QV2-BT0635-20040-102-002 BT0635 Homo sapiens cDNA
1040	10558	20801	1.52	6.0E-65	AV721886.1	EST_HUMAN	AV721888 HTB Homo sapiens cDNA clone HTBBZ08 5'
1890	11776		8.32	6.0E-65	AA509029.1	EST_HUMAN	q85910.x1 NCI_CGAP_P111 Homo sapiens cDNA clone IMAGE:996376 similar to q85X03002 60S RIBOSOMAL PROTEIN L32 (HUMAN);
7080	19657	27160	2.52	6.0E-65	AF063252.1	EST_HUMAN	sa07609.x1 NCI_CGAP_Coz21 Homo sapiens cDNA clone IMAGE:2593545 3' similar to TR-Q63306 Q63306 LONG INTERSPERSED REPEAT DNA CONTAINING 7 ORFs ; contains L1 b2 L1 repetitive element ;
7209	17085	27276	4.25	6.0E-65	AA427878.1	EST_HUMAN	zw85006.x1 Scores, total, fetus, N22HF8, 5w Homo sapiens cDNA clone IMAGE:73747 3'
7209	17085	27276	4.25	6.0E-65	AA427878.1	EST_HUMAN	zw85006.x1 Scores, total, fetus, N22HF8, 5w Homo sapiens cDNA clone IMAGE:73747 3'
8247	18127	28375	6.18	6.0E-65	BE507816.1	EST_HUMAN	601340465F1 NIH_MGC_59 Homo sapiens cDNA clone IMAGE:388287 5'
8787	19202	28952	4.76	6.0E-65	AI163210.2	NT	Homo sapiens chromosome 21 segment HS21020

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Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar BLAST Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
615	10551	20362	0.91	6.0E-05	AF064604.1	NT	Homo sapiens KEGO protein mRNA, partial cds
1331	11238	21094	1.62	5.0E-05	7691951	NT	Homo sapiens KIAA0156 gene product (KIAA0156), mRNA
1331	11238	21094	1.62	5.0E-05	7691951	NT	Homo sapiens KIAA0156 gene product (KIAA0156), mRNA
2110	11959	21899	1.02	6.0E-05	AB033768.1	NT	Homo sapiens hPAD-colony10 mRNA for peptidylarginine deiminase type 1, complete cds
3217	13141	22945	1.91	6.0E-05	4507848	NT	Homo sapiens ubiquitin specific protease 13 (leucylase 1-3) (USP13), mRNA
3217	13141	22945	1.91	6.0E-05	4507848	NT	Homo sapiens ubiquitin specific protease 13 (leucylase 1-3) (USP13), mRNA
186	10158	18975	1.09	4.0E-05	AL120418.1	EST_HUMAN	DKFZ76761G108, J1 791 (synonym: hamy2) Homo sapiens cDNA clone DKFZ76761G108 5'
728	10690	20491	1.56	4.0E-05	AI259438.1	EST_HUMAN	gm16001.x1 Scores: placenta_2NkHP8duW Homo sapiens cDNA clone IMAGE:1891800 3'
728	10690	20492	1.59	4.0E-05	AI259438.1	EST_HUMAN	gm16001.x1 Scores: placenta_2NkHP8duW Homo sapiens cDNA clone IMAGE:1891800 3'
1052	10978	20822	1.83	4.0E-05	4826735	NT	Homo sapiens fragile X mental retardation, autosomal homolog 1 (FXR1), mRNA
1470	11375	21240	8.28	4.0E-05	4506038	NT	Homo sapiens fibronectin protein L34 (RPL34) mRNA
2983	12171	22098	1.03	4.0E-05	BE221469.1	EST_HUMAN	h25604.x1 NC1 CGAP: Mat15 Homo sapiens cDNA clone IMAGE:3171102 3'
2983	12171	22098	1.03	4.0E-05	BE221469.1	EST_HUMAN	h25604.x1 NC1 CGAP: Mat15 Homo sapiens cDNA clone IMAGE:3171102 3'
5133	15005	21778	0.93	4.0E-05	8035293	NT	Homo sapiens low density lipoprotein receptor related protein-related 1 tumor (LRPDR1), mRNA
5133	15005	21778	0.93	4.0E-05	8035293	NT	Homo sapiens low density lipoprotein receptor related protein-related 1 tumor (LRPDR1), mRNA
5740	15948	22794	3.93	4.0E-05	AB033093.1	NT	Homo sapiens mRNA for KIAA1287 protein, partial cds
5740	15948	22795	3.93	4.0E-05	AB033093.1	NT	Homo sapiens mRNA for KIAA1287 protein, partial cds
6285	19149	25304	2.29	4.0E-05	11545780	NT	Homo sapiens hypothetical protein FLJ22037 (FLJ22037), mRNA
8020	17870		2.17	4.0E-05	AJ277546.2	NT	Homo sapiens WEE1 gene for protein kinase and partial ZNF143 gene for zinc finger transcription factor
8446	18320	26579	7.47	4.0E-05	AF118946.1	NT	Homo sapiens PRG1474 mRNA, complete cds
8471	10978	20822	1.34	4.0E-05	4826735	NT	Homo sapiens fragile X mental retardation, autosomal homolog 1 (FXR1), mRNA
9875	19434	25152	1.34	4.0E-05	11430460	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
1212	12046		5.37	3.0E-05	X78032.1	NT	H-sapiens H2P9 mRNA for zinc finger protein
1780	11679	21557	1.14	3.0E-05	AI000992.1	EST_HUMAN	ov23003.s1 Scores: testis, NHT Homo sapiens cDNA clone IMAGE:1039173 3' similar: to contains element MSR1 repetitive element.
3239	13162	22362	1.39	3.0E-05	4504650	NT	Homo sapiens lamitin, beta 1 (LAMBT1), mRNA
3660	13574	23351	0.96	3.0E-05	AI000992.1	EST_HUMAN	ov23003.s1 Scores: testis, NHT Homo sapiens cDNA clone IMAGE:1039173 3' similar: to contains element MSR1 repetitive element.
4551	14444	24228	1.41	3.0E-05	6912395	NT	Homo sapiens rab1 GTPase activating protein (GAP and centrosome-associated) (GAPCEN), mRNA
7793	17643	27676	1.43	3.0E-05	BE787366.1	EST_HUMAN	BM1476989Ft NIH_MGC_69 Homo sapiens cDNA clone IMAGE:3882405 5'

Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Mean Similarity BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Description
8693	17677	28119	9.89	3.0E-05	AA303006.1	EST HUMAN	zfx5d6r.1l Stores, testis, NHT Homo sapiens cDNA clone IMAGE:781042 5'
3368	13277	23078	5.27	2.0E-05	BE380294.1	EST HUMAN	602150069F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4298600 5'
5638	15843		4.55	2.0E-05	BE363373.1	EST HUMAN	601190883F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3034741 5'
6233	16059	25947	23.12	2.0E-05	BF176922.1	EST HUMAN	602134350F1 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:4286285 5'
7133	17010	27202	1.27	2.0E-05	AG024463.1	NT	Homo sapiens mRNA for FLJ00059 protein, partial cds
7133	17010	27203	1.27	2.0E-05	AG024463.1	NT	Homo sapiens SWISNF related, matrix associated, actin dependent regulator of chromatin, subfamily d, member 3 (SMARCD3), mRNA
8048	17936	28180	2.85	2.0E-05	11419247	NT	EST178785 Oden carcinoma (HCO) cell line Homo sapiens cDNA 5' end similar to endogenous intron
9106	18874		4.15	2.0E-05	AA307004.1	EST HUMAN	601954335F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:4073768 5'
9850	19504		2.37	2.0E-05	BP245964.1	EST HUMAN	601763488F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:4025501 5'
851	10059		1.68	1.0E-05	BF125544.1	EST HUMAN	Homo sapiens putative RGS GDP/GTP exchange factor homologue (RABEX5), mRNA
528	10470	20282	1.32	1.0E-05	7671486	NT	Homo sapiens mRNA for KIAA1513 protein, partial cds
1994	11898	21781	0.91	1.0E-05	AB540646.1	NT	h224805.1 NCL CGAP_G03 Homo sapiens cDNA clone IMAGE:3209888 3'
3326	13326	23052	0.89	1.0E-05	BE466881.1	EST HUMAN	Homo sapiens glyceral 4 (GPO4) mRNA
3917	13928	23000	2.13	1.0E-05	4504062	NT	Homo sapiens glyceral 4 (GPO4) mRNA
3917	13928	23007	2.13	1.0E-05	4504062	NT	Homo sapiens glyceral 4 (GPO4) mRNA
4112	14012	23789	2.37	1.0E-05	AW029401.1	EST HUMAN	w005003.X1 NCL CGAP_G44 Homo sapiens cDNA clone IMAGE:2543152 3'
4112	14012	23760	2.37	1.0E-05	AW029401.1	EST HUMAN	w005003.X1 NCL CGAP_G44 Homo sapiens cDNA clone IMAGE:2543152 3'
6802	16881	26870	1.56	1.0E-05	AW020481.1	EST HUMAN	QV2-3T0298-140200-042-R2 3T0298 Homo sapiens cDNA
6802	16881	26871	1.56	1.0E-05	AW020481.1	EST HUMAN	QV2-3T0298-140200-042-R2 3T0298 Homo sapiens cDNA
6842	16721	26914	2.38	1.0E-05	AU141295.1	EST HUMAN	AU141295 THYROT1 Homo sapiens cDNA clone THYROT100359 5'
6842	16721	26915	2.38	1.0E-05	AU141295.1	EST HUMAN	AU141295 THYROT1 Homo sapiens cDNA clone THYROT100359 5'
7132	17009	27201	1.76	1.0E-05	BF596707.1	EST HUMAN	602134350F1 NIH_MGC_55 Homo sapiens cDNA clone IMAGE:4283313 5'
7216	17092	27282	1.62	1.0E-05	AU120040.1	EST HUMAN	AU120040 NT2P22 Homo sapiens cDNA clone NT2P2204714 5'
7216	17092	27283	1.62	1.0E-05	AU120040.1	EST HUMAN	AU120040 NT2P22 Homo sapiens cDNA clone NT2P2204714 5'
7222	17099		2.83	1.0E-05	11431994	NT	Homo sapiens insulin 1,4,5 triphosphate receptor, type 1 (ITPR1), mRNA
7456	17285	27469	1	1.0E-05	A191716.1	EST HUMAN	q65602.41 Stores, testis, NHT Homo sapiens cDNA clone IMAGE:733450 3' similar to g3cM28861 ZINC
7897	17363	27763	6.26	1.0E-05	A1153793.1	EST HUMAN	FINGER PROTEIN 8 (HUMAN) isoforms MER19.1 MER19 repetitive element;
8042	17933	28181	2.23	1.0E-05	A25167.1	NT	Homo sapiens testis 4 version 1 (PCL4v1) gene, complete cds
8153	18046	28238	42.99	1.0E-05	45046600	NT	Homo sapiens ribosomal protein L7a (RPL7A) mRNA
8473	18346	28510	2.18	1.0E-05	BF596707.1	EST HUMAN	602134350F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4283313 5'

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8542	18414	29881	2.95	1.0E-05	AI021017.1	EST_HUMAN	tr760b.x1 NCL_GGA <sup>3</sup> _G08 Homo sapiens cDNA clone IMAGE:237170 3' similar to gp.L15633_mel PANCREATIN ASSOCIATED PROTEIN 1 PRECURSOR (HUMAN);
9155	18805	29881	2.27	1.0E-05	11418041	NT	Homo sapiens TNF-inducible protein CG12-1 (GG2-1), mRNA
9254	18803	29318	4.85	1.14E-22	NT	NT	Homo sapiens cathepsin E/LAG seven-pass G-type receptor 1 (CELSR1), mRNA
9055	18225	144	1.44	1.0E-05	11418248	NT	Homo sapiens sulfotransferase-related protein (SULT7B3), mRNA
65	10051	18664	1.51	9.0E-06	AL160311.1	NT	Novel human gene mapping to chromosome 22
65	10051	18665	1.51	9.0E-06	AL160311.1	NT	Novel human gene mapping to chromosome 22
1332	11239	21090	2.49	9.0E-06	50318900	NT	Homo sapiens 20S proteasome-associated padf homolog (POH1) mRNA
1332	11239	21097	2.49	9.0E-06	50318900	NT	Homo sapiens 20S proteasome-associated padf homolog (POH1) mRNA
1465	11373	21097	4.18	9.0E-06	M87250.1	NT	Human transposon-like element, partial
3526	13738	23539	0.9	9.0E-06	N72393.1	NT	Human calcium-dependent phospholipid-binding protein (PLA2) mRNA, complete cds
3526	13738	23539	0.9	9.0E-06	N72393.1	NT	Human calcium-dependent phospholipid-binding protein (PLA2) mRNA, complete cds
4591	14470	24068	0.88	8.0E-06	AA124304.1	EST_HUMAN	26A026.11 Soar, NHVPU_S1 Homo sapiens cDNA clone IMAGE:767048 F
8584	18543	24068	1.75	7.0E-06	BC094410.1	EST_HUMAN	RC4-B7031.141186-011-H06 E10311 Homo sapiens cDNA
4295	14168	23944	1.22	8.0E-06	A024653.1	EST_HUMAN	wa57607.x1 NCL_GGAP_Lu19 Homo sapiens cDNA clone IMAGE:2449597 3' similar to WP.F1509.4A CE16595
4295	14168	23945	1.22	8.0E-06	A024653.1	EST_HUMAN	wa57607.x1 NCL_GGAP_Lu19 Homo sapiens cDNA clone IMAGE:2449597 3' similar to WP.F1509.4A CE16595
4295	14168	23946	1.22	8.0E-06	A024653.1	EST_HUMAN	wa57607.x1 NCL_GGAP_Lu19 Homo sapiens cDNA clone IMAGE:2449597 3' similar to WP.F1509.4A CE16595
8469	18572	29506	7.07	5.0E-05	X67815.1	NT	H sapiens mRNA for ribosomal protein L31
1344	11590	21107	2.76	5.0E-06	BC094410.1	EST_HUMAN	RC4-B7031.141186-011-H06 E10311 Homo sapiens cDNA
7357	17226	27424	12.31	5.0E-06	11420957	NT	Homo sapiens thyroid hormone receptor binding protein (ABR) mRNA
773	10703	20542	0.79	4.0E-06	6378916	NT	Mus musculus fragile X mental retardation syndrome 1 homolog (Fmr1), mRNA
2235	12120	22022	1.94	4.0E-06	X6821.1	NT	H sapiens DNA for endogenous retroviral like element
2425	12202	22022	3.86	4.0E-06	AJ223904.1	NT	Homo sapiens germ-line DNA upstream of Jappa locus
4074	14590	23576	5.15	4.0E-06	9335467	NT	Human endogenous retrovirus, complete genome
5407	15326	23576	3.35	4.0E-06	11429843	NT	Homo sapiens methylene tetrahydrofolate dehydrogenase (NAD <sup>+</sup> dependent), methenyltetrahydrofolate cyclohydrolase (MTHFD2), mRNA
5612	15326	25494	1.78	4.0E-06	AW639116.1	EST_HUMAN	QY17D0068-110200-067-5'0 DT0069 Homo sapiens cDNA
0060	15106	24869	4.71	4.0E-06	AW605473.1	EST_HUMAN	EST137546 IMAGE: resseques, MAG1 Homo sapiens cDNA
6232	16038	25245	6.89	4.0E-06	U78168.1	NT	Homo sapiens cAMP-regulated guanine nucleotide exchange factor 1 (CAMP-GEF1) mRNA, complete cds
6708	16588	23776	6.38	4.0E-06	11421639	NT	Homo sapiens hypothetical protein FLJ20116 (FLJ20116), mRNA

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8082	17043	28193	1.96	4.0E-06	BF307493.1	EST_HUMAN	U1H-BW1-amm-a-10-Q-U1-1 NCI_GGAP_3u87 Homo sapiens cDNA clone IMAGE:3070747 5'
1408	11313	21716	24.62	3.0E-06	4502088	NT	Homo sapiens soluble carrier family 25 (mitochondrial carrier, adenine nucleotide translocator), member 5 (SLC22A5), nuclear gene encoding mitochondrial protein, mRNA
1408	11313	21716	24.62	3.0E-06	4602098	NT	Homo sapiens soluble carrier family 25 (mitochondrial carrier, adenine nucleotide translocator), member 5 (SLC22A5), nuclear gene encoding mitochondrial protein, mRNA
1639	11834	21717	0.84	3.0E-06	N59323.1	EST_HUMAN	Y27121.71 Soares, multiple, scdros, 2NHMSP Homo sapiens cDNA clone IMAGE:284326 5' similar to SW-HB1, TIGCA P30689 HISTONE H2B, 1H2B.2, [2] PR-B68612 ;
1639	11834	21716	0.84	3.0E-06	N59323.1	EST_HUMAN	Y27121.71 Soares, multiple, scdros, 2NHMSP Homo sapiens cDNA clone IMAGE:284326 5' similar to SW-HB1, TIGCA P30689 HISTONE H2B, 1H2B.2, [2] PR-B68612 ;
1639	11834	21719	0.84	3.0E-06	N59323.1	EST_HUMAN	Y27121.71 Soares, multiple, scdros, 2NHMSP Homo sapiens cDNA clone IMAGE:284326 5' similar to SW-HB1, TIGCA P30689 HISTONE H2B, 1H2B.2, [2] PR-B68612 ;
2675	12540	22430	2.91	3.0E-06	11141880	NT	Homo sapiens TGF-beta-induced transcription factor 2 (TGIF2), mRNA
3079	13009	22787	5.47	3.0E-06	7852223	NT	Homo sapiens KIAA0849 gene product (KIAA0849), mRNA
5628	15445	25511	1.84	3.0E-06	11417948	NT	Homo sapiens NIPSNAP, C. elegans, homolog 1 (NIPSNAP1), mRNA
5628	15445	25512	1.84	3.0E-06	11417948	NT	Homo sapiens NIPSNAP, C. elegans, homolog 1 (NIPSNAP1), mRNA
8900	18914	28904	8.31	3.0E-06	5453949	NT	Homo sapiens protein phosphatase 2, regulatory subunit B (B55), alpha isoform (PPP2R5A) mRNA
461	10033	19537	1.02	2.0E-06	7676334	NT	Homo sapiens Methylglucosylated protein kinase (MINK), mRNA
461	10033	19538	1.02	2.0E-06	7676334	NT	Homo sapiens Methylglucosylated protein kinase (MINK), mRNA
416	9983	19774	0.83	2.0E-06	4505524	NT	Homo sapiens origin recognition complex, subunit 5 (yeast homolog)-like (ORCL), mRNA, and translated products
416	9983	19775	0.83	2.0E-06	4505524	NT	Homo sapiens origin recognition complex, subunit 5 (yeast homolog)-like (ORCL), mRNA, and translated products
1784	17182	21760	2.02	2.0E-06	AI16301.2	NT	Homo sapiens chorionectin 21, significant HS2C101
2841	12571	22856	0.96	2.0E-06	AB5865.1	NT	H. sapiens pseudogene for the low affinity T-3 receptor
3075	13882	23857	0.96	2.0E-06	AF108368.1	NT	Homo sapiens sodium/cation exchanger isoform Ncx1 (NCX1) mRNA, complete cds
4650	14448	24233	12.99	2.0E-06	AI193267.2	NT	Homo sapiens HLA-B gene for human leukocyte antigen B
4650	14448	24234	12.99	2.0E-06	AI193267.2	NT	Homo sapiens HLA-B gene for human leukocyte antigen B
7135	17012	27205	2.16	2.0E-06	N45480.1	EST_HUMAN	Y69502.71 Soares, multiple, scdros, 2NHMSP Homo sapiens cDNA clone IMAGE:277628 5'
9475	19712		2.22	2.0E-06	11418318	NT	Homo sapiens G-2 and S-phases expressed 1 (GTSE1), mRNA
2861	12792	22855	1.38	1.0E-06	AF171817.1	EST_HUMAN	AV171817 DGB Homo sapiens cDNA clone DGBAD007 5'
2861	12792	22856	1.38	1.0E-06	AF171817.1	EST_HUMAN	AV171817 DGB Homo sapiens cDNA clone DGBAD007 5'
4288	12792	22855	3.26	1.0E-06	AF171817.1	EST_HUMAN	AV171817 DGB Homo sapiens cDNA clone DGBAD007 5'
4288	12792	22856	3.26	1.0E-06	AF171817.1	EST_HUMAN	AV171817 DGB Homo sapiens cDNA clone DGBAD007 5'

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Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5306	15227	26531	5.36	1.0E-66	BF070088.1	EST_HUMAN	6021535667 NIH_MGC_B1 Homo sapiens cDNA clone IMAGE:4294161.5'
6143	18691	28126	1.49	1.0E-66	BF326623.1	EST_HUMAN	RG5EN0163-410000-034-C06 BN0193 Homo sapiens cDNA
6626	18804	28948	1.37	1.0E-66	AA68888.1	EST_HUMAN	aa68004.s1 NC1 CGAP_CCB1 Homo sapiens cDNA clone IMAGE:377282.3'
8312	18186	28438	2.35	1.0E-66	AF11167.2	NT	Homo sapiens lung dimethylization protein gene, partial cds, complete cds, and unknown gene
9200	18665		2.05	9.0E-67	11418177	NT	Homo sapiens Pan GTPase activating protein 1 (RANGAP1), mRNA
4820	14711		0.84	8.0E-67	M78158.1	EST_HUMAN	EST10750 Subtracted Hippocampus, Striatum (cat. #635205) Homo sapiens cDNA clone HHQFN31 similar to L1 repetitive element
376	10390	20184	6.19	7.0E-67	AW162232.1	EST_HUMAN	af75402.x1 Schneider field brain 00004 Homo sapiens cDNA clone IMAGE:2782383.3' similar to gb:M37104 ATP SYNTHASE COUPLING FACTOR 6, MITOCHONDRIAL PRECURSOR (HUMAN);
1300	11266	21122	2.63	7.0E-67	AA383416.1	EST_HUMAN	EST106812 Testis Homo sapiens cDNA 6' and similar to similar to C. elegans hypothetical protein, cosmid ZK393
1535	11436	21266	1	7.0E-67	W85947.1	EST_HUMAN	af55605.f1 Soares_fetal_liver_spleen_TNFS1 S1 Homo sapiens cDNA clone IMAGE:416049.5'
1535	11436	21267	1	7.0E-67	W85947.1	EST_HUMAN	af55605.f1 Soares_fetal_liver_spleen_TNFS1 S1 Homo sapiens cDNA clone IMAGE:416049.5'
1988	11881	21173	1.06	7.0E-67	7657243	NT	Homo sapiens isolated 1.3.4-hydroxylase 616 kinase (ITPK1), mRNA
1988	11881	21174	1.06	7.0E-67	7657243	NT	Homo sapiens isolated 1.3.4-hydroxylase 616 kinase (ITPK1), mRNA
2776	10390	20184	7.07	7.0E-67	AW162232.1	EST_HUMAN	af75402.x1 Schneider field brain 00004 Homo sapiens cDNA clone IMAGE:2782383.3' similar to gb:M37104 ATP SYNTHASE COUPLING FACTOR 6, MITOCHONDRIAL PRECURSOR (HUMAN);
5783	16569	25807	2.04	7.0E-67	11425572	NT	Homo sapiens adaptor-related protein complex 2, beta 1 subunit (AP2B1), mRNA
5783	16569	25808	2.04	7.0E-67	11425572	NT	Homo sapiens adaptor-related protein complex 2, beta 1 subunit (AP2B1), mRNA
5036	18826	28111	1.66	7.0E-67	11430460	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
5036	18826	28112	1.66	7.0E-67	11430460	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
5501	18116	25292	3.33	7.0E-67	AB011369.1	NT	Homo sapiens gene for AF-6, complete cds
9608	19357		1.43	7.0E-67	11421527	NT	Homo sapiens calcium channel, voltage-dependent, alpha 2delta subunit 1 (CACNA2D1), mRNA
647	10488	20297	1.32	6.0E-67	X68896.1	NT	H. sapiens mRNA for acetyl-CoA carboxylase
778	10708	20647	1.6	6.0E-67	Y17227.1	NT	Homo sapiens mRNA for transmembrane receptor protein
1282	11156	21068	0.83	6.0E-67	Y14320.1	NT	Homo sapiens PMP69 gene, exons 3,4,5,6 & 7
3131	13056	22856	1.24	6.0E-67	4506434	NT	Homo sapiens refoldinectin 1 (including osteocalcin) (R91) mRNA
3391	13308	23106	1.2	6.0E-67	4507352	NT	Homo sapiens Synapsin III (SYN3) mRNA, and translated products
3391	13308	23107	1.2	6.0E-67	4507352	NT	Homo sapiens Synapsin III (SYN3) mRNA, and translated products
4035	13938	23714	1.28	6.0E-67	AL103201.2	NT	Homo sapiens chromosome 21 segment HS21C001
4035	13938	23715	1.28	6.0E-67	AL103201.2	NT	Homo sapiens chromosome 21 segment HS21C001
4607	14465	24283	3.37	6.0E-67	7657020	NT	Homo sapiens DKFZ-344P211 protein (DKFZP-344P211), mRNA
4607	14465	24284	3.37	6.0E-67	7657020	NT	Homo sapiens DKFZ-344P211 protein (DKFZP-344P211), mRNA

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Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6126	14761		2.1	6.0E-67	4507648	NT	Homo sapiens ubiquitin specific protease 13 (ubiquitinase T-3) (USP13) mRNA
3194	13109	22813	2.45	5.0E-67	AF009890.1	EST_HUMAN	Homo sapiens T cell receptor beta locus, TCRBV7S3.2 to TCRBV7S2.2 region
8362	18229		2.1	5.0E-67	BE010038.1	EST_HUMAN	PM3-BNG076-100400-001-g04 BNG176 Homo sapiens cDNA
1306	12162	21066	1.23	4.0E-67	RG0818.1	EST_HUMAN	YNO217.1 T1 Source adult brain N2b-HB567 Homo sapiens cDNA clone IMAGE:167263 6'
6883	10762		1.22	4.0E-67	BF357321.1	EST_HUMAN	RC0470684-165000-026-c03 T10834 Homo sapiens cDNA
8416	18290		2.3	4.0E-67	AA14284.1	EST_HUMAN	nm00601.srl NCL CGAP_S31 Homo sapiens cDNA clone IMAGE:129472 3' similar to TR-O10385 O10385
2732	10553	20365	0.93	3.0E-67	AA333785.1	EST_HUMAN	PR0-POL-DUTPASE POLYPROTEIN;
3407	13324	23120	1.14	3.0E-67	BE004410.1	EST_HUMAN	RC-4-BT0311-141189-011-H06 BT0311 Homo sapiens cDNA
4596	14484	24270	3.14	3.0E-67	AW961569.1	EST_HUMAN	MR3-SN0066-040500-008-007 SN0066 Homo sapiens cDNA
6720	16039	26827	1.22	3.0E-67	BF160068.1	EST_HUMAN	h01706.x1 NCL CGAP_Kd41 Homo sapiens cDNA clone IMAGE:3149413 3' similar to SW-RHOP_MOUSE
8533	18461		19.27	3.0E-67	AA627814.1	EST_HUMAN	om18007.x1 Scores_NEL_1_GEC_S1 Homo sapiens cDNA clone IMAGE:3183136 3' similar to WIP-F23H11.9
190	10152	19687	1.94	2.0E-67	BE348354.1	EST_HUMAN	CE09817.1
827	10764	20304	6	2.0E-67	AW181406.1	EST_HUMAN	h017609.x1 NCL CGAP_Luc4 Homo sapiens cDNA clone IMAGE:3183136 3' similar to WIP-F23H11.9
1099	11008		1.74	2.0E-67	AF167460.1	NT	Homo sapiens double stranded RNA activated protein kinase (PKR) gene, exon 2a, 2, 3, and 4
1841	11737	21614	1.5	2.0E-67	BE303037.1	EST_HUMAN	h017609.x1 NCL CGAP_Luc4 Homo sapiens cDNA clone IMAGE:3183136 3' similar to WIP-F23H11.9
1841	11737	21615	1.5	2.0E-67	BE303037.1	EST_HUMAN	h017609.x1 NCL CGAP_Luc4 Homo sapiens cDNA clone IMAGE:3183136 3' similar to WIP-F23H11.9
2398	12216	22116	0.88	2.0E-67	AF309961.1	NT	h017609.x1 NCL CGAP_Luc4 Homo sapiens cDNA clone IMAGE:3183136 3' similar to WIP-F23H11.9
2381	12261	22163	1.2	2.0E-67	4759705	EST_HUMAN	Homo sapiens K14B5 zinc finger protein ZFQR mRNA, complete cds
3422	13339	23144	3.6	2.0E-67	AA25755.1	EST_HUMAN	Homo sapiens developmentally regulated GTP-binding protein 1 (DRG1), mRNA
3921	13930	23010	2.33	2.0E-67	AL163300.2	NT	ZNF497.1 T1 Source, testis, NHT Homo sapiens cDNA clone IMAGE:745892 3'
5724	15631	25734	4.22	2.0E-67	BF240768.1	EST_HUMAN	Homo sapiens chromosome 21 segment H521C100
5903	15708	26520	2.17	2.0E-67	AB051783.1	NT	h017609.x1 NCL CGAP_Luc4 Homo sapiens cDNA clone IMAGE:3183136 3' similar to WIP-F23H11.9
8603	15708	26521	2.17	2.0E-67	AB051783.1	NT	Homo sapiens mRNA for NAADPH-cytochrome P-450 reductase, complete cds
7202	17079	27764	1.34	2.0E-67	AW802835.1	EST_HUMAN	Homo sapiens mRNA for NAADPH-cytochrome P-450 reductase, complete cds
7202	17079	27765	1.34	2.0E-67	AW802835.1	EST_HUMAN	RC-4-BT05864-170100-011-c07 BT0586 Homo sapiens cDNA
8409	19769		3.78	2.0E-67	11439448	NT	h017609.x1 NCL CGAP_Luc4 Homo sapiens cDNA clone IMAGE:3183136 3' similar to WIP-F23H11.9
8538	18428	28698	1.77	2.0E-67	BE1265714.1	EST_HUMAN	Homo sapiens KIAA0695 protein (KIAA0695), mRNA
8751	17500	28144	2.26	2.0E-67	BF377180.1	EST_HUMAN	h017609.x1 NCL CGAP_Luc4 Homo sapiens cDNA clone IMAGE:3183136 3' similar to WIP-F23H11.9
9398	19577	25056	2.6	2.0E-67	11418169	NT	h017609.x1 NCL CGAP_Luc4 Homo sapiens cDNA clone IMAGE:3183136 3' similar to WIP-F23H11.9

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Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Mod Similar CTD-Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
253	10219	20396	4.37	1.0E-67	4802166	NT	Human sapiens amyloid beta (A4) precursor protein (protease sensitive), Alzheimer disease (APP), mRNA
2129	12017	21915	2.46	3.0E-61	BE307032.1	EST_HUMAN	Human sapiens 58F NIH_MGC_69 Homo sapiens cDNA clone IMAGE:3802254 5'
3794	13708	23402	4.98	8.0E-68	AA209456.1	EST_HUMAN	SW.SAV_SULAC 007590 SAV PROTEIN. ; 2422H10.1 Stralagene INT neuron (8937283) Homo sapiens cDNA clone IMAGE:848183 5' similar to
3794	13708	23403	4.96	8.0E-68	AA209455.1	EST_HUMAN	SW.SAV_SULAC 007590 SAV PROTEIN. ; 2422H10.1 Stralagene INT neuron (8937283) Homo sapiens cDNA clone IMAGE:848183 5' similar to
1849	11745		2.2	6.0E-68	AV503842.1	EST_HUMAN	UHFE-ENO-ab-c-07-04-UT NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3078924 5'
7971	17821	28004	2.46	6.0E-68	11422036	NT	Human sapiens bivalent A-initiated guanine nucleotide-exchange protein 2 (BIS2), mRNA Human sapiens killer inhibitory receptor 2-2-1 (KIR221) and killer inhibitory receptor 2-2-2 (KIR222) genes, partial cds
8489	15362	28627	1.53	6.0E-68	AF133901.1	NT	Human sapiens cDNA clone IMAGE:3855761 5'
9878	18224		1.42	6.0E-68	BE612554.1	EST_HUMAN	Human sapiens cDNA clone IMAGE:124144 5'
9918	18301	28178	1.36	6.0E-68	BE110975.1	EST_HUMAN	Human sapiens cDNA clone IMAGE:124144 5'
785	12642	20566	0.87	5.0E-68	AF231919.1	NT	Human sapiens chromosome 21 unknown mRNA
785	12642	20566	0.87	5.0E-68	AF231919.1	NT	Human sapiens chromosome 21 unknown mRNA
802	10731	20572	3.87	5.0E-68	AF231919.1	NT	Human sapiens chromosome 21 unknown mRNA
3108	13034	22650	2.62	5.0E-68	AF231919.1	NT	Human sapiens cDNA for KIAA1431 protein, partial cds
2480	12356	22247	1.01	4.0E-68	11421988	NT	Human sapiens transcription factor TAF (TAF), mRNA
2480	12356	22248	1.01	4.0E-68	11421988	NT	Human sapiens transcription factor TAF (TAF), mRNA
4000	14790		17.24	4.0E-68	P04406	SWISSPROT	Human sapiens cDNA clone IMAGE:124144 5'
6001	18044	28188	5.64	4.0E-68	11055991	NT	Human sapiens cDNA clone IMAGE:124144 5'
6001	18044	28186	5.64	4.0E-68	11055991	NT	Human sapiens cDNA clone IMAGE:124144 5'
7225	17102	27260	5.41	4.0E-68	D63479.2	NT	Human sapiens cDNA clone IMAGE:124144 5'
7225	17102	27291	5.41	4.0E-68	D63479.2	NT	Human sapiens cDNA clone IMAGE:124144 5'
7295	17171	27371	2.39	4.0E-68	AB040918.1	NT	Human sapiens cDNA clone IMAGE:124144 5'
3611	13525	23312	5.61	3.0E-68	AF236082.1	NT	Human sapiens cDNA clone IMAGE:124144 5'
7441	16454		4.44	3.0E-68	AI842323.1	EST_HUMAN	Human sapiens cDNA clone IMAGE:124144 5'
7697	17847	28008	1.45	3.0E-68	F28784.1	EST_HUMAN	Human sapiens cDNA clone IMAGE:124144 5'
9872	15902		1.53	3.0E-68	AF593485.1	EST_HUMAN	Human sapiens cDNA clone IMAGE:124144 5'
2832	15076		12.29	2.0E-68	D00522.1	NT	Human sapiens cDNA clone IMAGE:124144 5'
4593	14473	24201	1.65	2.0E-68	AB004881.1	NT	Human sapiens cDNA clone IMAGE:124144 5'
6110	18004		8	2.0E-68	R45088.1	EST_HUMAN	Human sapiens cDNA clone IMAGE:124144 5'





Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1536	11440		1.35	3.0E-09	T00514.1	EST_HUMAN	W06040.1 Soares Infant brain 1NB Homo sapiens cDNA clone IMAGE:24850 5' similar to SP-A4839
2325	12205		0.88	3.0E-09	5729010	NT	A-4839: SPEG III-EGF REPEAT-CONTAINING FIBROPELIN-LIKE PROTEIN - SEA URCHIN ;
3090	13907	23074	0.80	3.0E-09	A765688.1	EST_HUMAN	Homo sapiens lymphatic vessel endothelial hyaluronan receptor 1 (LYVE-1) mRNA
5209	15087	29105	5.94	3.0E-09	11418185	NT	W05958.X1 NCICQAP Kd11 Homo sapiens cDNA clone IMAGE:2855758 3'
6387	16249	28410	1.37	3.0E-09	U52351.1	NT	Homo sapiens acylase 2, mitochondrial (ACO2), mRNA
6457	6518	28485	8.43	3.0E-09	AF28076.1	NT	Homo sapiens arm-repeat protein NPRAP/neurojuncin (CTNND2) mRNA, partial cds
7091	6508		1.20	3.0E-09	AA37599.1	EST_HUMAN	EST16807 HSC712 cells II Homo sapiens cDNA 5' end similar to ribosomal protein S18
7417	7284	27491	1.54	3.0E-09	K13223.1	NT	H. sapiens mRNA for N-acetylglucosaminide beta 1-4-galactosyltransferase
7463	7263	27569	2.24	3.0E-09	X06233.1	NT	Human mRNA for calcium-binding protein in macrophages (MRP-14) macrophage migration inhibitory factor (MIF)-related protein
8036	7528	28574	3.07	3.0E-09	11432120	NT	Homo sapiens ribosomal protein S16a (RPS16A) mRNA
8215	16069		7.12	3.0E-09	AA376395.1	EST_HUMAN	EST16807 HSC712 cells II Homo sapiens cDNA 5' end similar to ribosomal protein S18
9169	15911		4.13	3.0E-09	11410197	NT	Homo sapiens HSC62.3 protein (HSC62.3), mRNA
124	10344	20170	1	2.0E-09	AF160352.1	NT	Homo sapiens KIAA0553 protein gene, complete cds; and alpha1b protein gene, partial cds
124	10344	20171	1	2.0E-09	AF160352.1	NT	Homo sapiens KIAA0553 protein gene, complete cds; and alpha1b protein gene, partial cds
368	10344	20170	4.94	2.0E-09	AF160352.1	NT	Homo sapiens KIAA0553 protein gene, complete cds; and alpha1b protein gene, partial cds
368	10344	20171	4.94	2.0E-09	AF160352.1	NT	Homo sapiens KIAA0553 protein gene, complete cds; and alpha1b protein gene, partial cds
1842	11738	21616	1.2	2.0E-09	BE25785.1	EST_HUMAN	50110844-F1 NIH_MGC-16 Homo sapiens cDNA clone IMAGE:3350774 6'
2813	11742		2.73	2.0E-09	AA331157.1	EST_HUMAN	24719024-F1 Scores, Jaccard NHT Homo sapiens cDNA clone IMAGE:781682 3'
1675	11677	21465	2.35	1.0E-09	AF053768.1	NT	Scavenger brain specific collagen-binding protein CBSP90 mRNA, partial cds
9981	15986	20008	3.68	1.0E-09	AW39066.1	EST_HUMAN	QV01-TT0010-031109-015-c07 T10910 Homo sapiens cDNA
0090	16003	28211	1.55	1.0E-09	7662203	NT	Homo sapiens KIAA00716 gene product (KIAA00716), mRNA
0090	16003	28212	1.55	1.0E-09	7662203	NT	Homo sapiens KIAA00716 gene product (KIAA00716), mRNA
0088	16033	28173	2.93	1.0E-09	AB043973.1	NT	Homo sapiens mRNA for KIAA1147 protein, partial cds
0088	16033	28174	2.93	1.0E-09	AB043973.1	NT	Homo sapiens mRNA for KIAA1147 protein, partial cds
7847	17697	27542	6.29	1.0E-09	BE246070.1	EST_HUMAN	TCBAP1E2078 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HGSC project:TCBA Homo sapiens cDNA clone TCBAP2078
7847	17697	27543	6.29	1.0E-09	BE246070.1	EST_HUMAN	TCBAP1E2078 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HGSC project:TCBA Homo sapiens cDNA clone TCBAP2078
8245	18126		23.27	1.0E-09	4504918	NT	Homo sapiens keratin 8 (KRT18) mRNA
9105	18872	28786	1.53	1.0E-09	BF126897.1	EST_HUMAN	50112902-F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:4029785 6'

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9510	19124		2.32	1.0E-69	AB059994.1	EST_HUMAN	wf6408.x1 Soares, NEL_T_GBC_31 Homo sapiens cDNA clone IMAGE:2903960 3' similar to contains Alu repetitive element contains element M1T repetitive element;
2284	42717	22095	1.52	8.0E-70	AA320303.1	EST_HUMAN	nc13121.1 NCI CGAP_F11 Homo sapiens cDNA clone IMAGE:1008023
4277	14176	23954	2.16	8.0E-70	L77969.1	NT	Homo sapiens DGS1-H mRNA, 3' end
1771	11970	21547	1.93	7.0E-70	AA97807.1	EST_HUMAN	tn8101.x1 NCI CGAP_Bm25 Homo sapiens cDNA clone IMAGE:2705306 3'
1771	11970	21548	1.93	7.0E-70	AA97807.1	EST_HUMAN	tn8101.x1 NCI CGAP_Bm25 Homo sapiens cDNA clone IMAGE:2705306 3'
1888	11784	21890	1.83	7.0E-70	AA282565.1	EST_HUMAN	z11904.x1 NCI CGAP_G081 Homo sapiens cDNA clone IMAGE:713239 5'
2018	11509		3.57	7.0E-70	60316083	NT	Homo sapiens tumor suppressor deleted in oral cancer-related 1 (DOC-1R) mRNA
4132	14032	23907	3.80	7.0E-70	4757723	NT	Homo sapiens adenylate cyclase 3 (ADCY3) mRNA
6390	15289	25124	5.28	7.0E-70	AB032269.1	NT	Homo sapiens MIST mRNA, partial cds
6390	15289	25125	5.28	7.0E-70	AB032269.1	NT	Homo sapiens MIST mRNA, partial cds
6138	15965	26120	1.89	7.0E-70	AJ000521.1	NT	Homo sapiens gene encoding splicing factor SF1, exons 2-8
6910	16788	26960	2.36	7.0E-70	AB037715.1	NT	Homo sapiens mRNA for KIAA1284 protein, partial cds
6910	16788	26961	2.36	7.0E-70	AB037715.1	NT	Homo sapiens mRNA for KIAA1284 protein, partial cds
7093	16940	27131	3.98	7.0E-70	U70999.1	NT	Human displacement protein (CGAAT) mRNA
7093	16940	27132	3.98	7.0E-70	U70999.1	NT	Human displacement protein (CGAAT) mRNA
7283	17156	27357	3.72	7.0E-70	V5984.1	NT	Human PRX3 mRNA
7283	17156	27358	3.72	7.0E-70	V5984.1	NT	Human PRX3 mRNA
7428	16441	28927	3.13	7.0E-70	AF153715.1	NT	Homo sapiens phospholipid scramblase 1 gene, exon 4 and 5 flanking region
7440	16457	28948	1.56	7.0E-70	11526594	NT	Homo sapiens karyophilin beta 2b, transporthin (TRN2), mRNA
7445	16457	28949	1.56	7.0E-70	11526594	NT	Homo sapiens karyophilin beta 2b, transporthin (TRN2), mRNA
8875	18887	28978	1.78	7.0E-70	11526319	NT	Homo sapiens HIR (histone cell cycle regulation defective, S. cerevisiae) homolog A (HIRA), mRNA
8875	18887	28979	1.78	7.0E-70	11526319	NT	Homo sapiens HIR (histone cell cycle regulation defective, S. cerevisiae) homolog A (HIRA), mRNA
883	10760	20930	1.63	6.0E-70	4502108	NT	Homo sapiens amyloid beta (A4) precursor protein (protease inhibitor, Alzheimer disease) (APP), mRNA
2090	11979	21874	1.36	6.0E-70	M30938.1	NT	Human Ku (p70/80) subunit mRNA, complete cds
2461	12338	22322	0.99	6.0E-70	8922899	NT	Homo sapiens GMP-N-acetylneuraminic acid synthase (LOC55807), mRNA
2905	12723	22266	1.83	5.0E-70	7862307	NT	Homo sapiens KIAA0782 gene product (KIAA0782), mRNA
2905	12723	22269	1.83	5.0E-70	7862307	NT	Homo sapiens KIAA0782 gene product (KIAA0782), mRNA
9716	18879		1.73	8.0E-70	BE166034.1	EST_HUMAN	MR3-HIT0487-110200-115-a06 HT0487, mRNA
1571	11475	21332	0.89	3.0E-70	BC071796.1	EST_HUMAN	RC0-BT0322-071299-011-a12 BT0322 Homo sapiens cDNA
1571	11475	21333	0.89	3.0E-70	BC071796.1	EST_HUMAN	RC0-BT0322-071299-011-a12 BT0322 Homo sapiens cDNA

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Single Exon Probes Expressed In Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8345	15751	25686	3.88	3.0E-70	BF065233.1	EST_HUMAN	602141561F1 NIH MGC 48 Homo sapiens cDNA clone IMAGE:302808 5'
8345	15751	25686	3.88	3.0E-70	BF065233.1	EST_HUMAN	602141561F1 NIH MGC 48 Homo sapiens cDNA clone IMAGE:302808 5'
674	10603	20426	13.15	2.0E-70	M42161.1	EST_HUMAN	W071010.1 Soares melanocyte 2N6HM Homo sapiens cDNA clone IMAGE:270522 5' similar to SW.D3H1 RAT P29209 3-HYDROXYISOBUTYRATE DEHYDROGENASE PRECURSOR ;
674	10603	20427	13.15	2.0E-70	M42161.1	EST_HUMAN	W071010.1 Soares melanocyte 2N6HM Homo sapiens cDNA clone IMAGE:270522 5' similar to SW.D3H1 RAT P29209 3-HYDROXYISOBUTYRATE DEHYDROGENASE PRECURSOR ;
689	10522	20449	2.01	2.0E-70	AZ46899.1	EST_HUMAN	q5f101.xt NCI CGAP P-part Homo sapiens cDNA clone IMAGE:2004813 3'
1004	10522	20766	1.7	2.0E-70	8923669	NT	Homo sapiens hypothetical protein FLJ20755 (FLJ20755), mRNA
1107	11079	20524	1.95	2.0E-70	7961843	NT	Homo sapiens KIAA0183 gene product (KIAA0183), mRNA
1157	11079	20525	1.95	2.0E-70	7961843	NT	Homo sapiens KIAA0183 gene product (KIAA0183), mRNA
1357	11292	21148	0.97	2.0E-70	BE47311.1	EST_HUMAN	h25f4c12.xt NCI CGAP LU24 Homo sapiens cDNA clone IMAGE:3212758 3'
1708	11609	21479	2.09	2.0E-70	AL163202.2	NT	Homo sapiens chromosome 21 segment H5210002
2272	12158		3.82	2.0E-70	A054910.1	EST_HUMAN	Z48904.1 Soares ratine U244HR Homo sapiens cDNA clone IMAGE:330214 5' similar to SW.GAG_HTL1A
3363	13070	23048	3.95	2.0E-70	M69181.1	NT	P03945 GAG POLYPROTEIN ;
8335	13504	25156	8.05	2.0E-70	XZ2832.1	NT	Human nematode myosin heavy chain-B (MYH10) mRNA, partial cds
8335	13504	25157	8.05	2.0E-70	XZ2832.1	NT	H sapiens gene for schwannin (CS9)
8335	13504	25157	8.05	2.0E-70	XZ2832.1	NT	H sapiens gene for schwannin (CS9)
8758	18373	25730	1.42	2.0E-70	AF510105.1	NT	Homo sapiens NALP1 mRNA, complete cds
8989	18504	26028	1.88	2.0E-70	D12623.1	NT	Human mRNA for NF1 protein isoform (neurofibromin isoform), complete cds
8010	19515	28042	0.83	2.0E-70	AF123074.1	NT	Homo sapiens cytoplasmic dyshin intermediate chain 1 mRNA, complete cds
8010	19515	28043	0.83	2.0E-70	AF123074.1	NT	Homo sapiens cytoplasmic dyshin intermediate chain 1 mRNA, complete cds
6177	15134	24853	1.99	2.0E-70	11422642	NT	Homo sapiens sialyltransferase 6 (N-acetylglucosaminide alpha 2,3-sialyltransferase) (SIAT6), mRNA
8918	16468	26855	7.67	2.0E-70	M2741.1	NT	Human gamma nucleotide-binding protein alpha-subunit gene (G-s-alpha), exons 4 and 5
7835	17685	27930	1.3	2.0E-70	AF123303.1	NT	Homo sapiens calmodulin-binding transporter mRNA, partial cds
8422	18298	28560	3.19	2.0E-70	8929420	NT	Homo sapiens hypothetical protein FLJ20450 (FLJ20450), mRNA
8422	18298	28561	3.19	2.0E-70	8929420	NT	Homo sapiens hypothetical protein FLJ20450 (FLJ20450), mRNA
8508	18716	29010	5.82	2.0E-70	4603920	NT	Homo sapiens eukaryotic translation initiation factor 3, subunit 5 (480) (EIF3S5) mRNA
9409	19114	26250	2.58	2.0E-70	11430460	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
9409	19114	26250	2.58	2.0E-70	11430460	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
3347	13267		2.97	1.0E-70	4507476	NT	Homo sapiens transglutaminase 3 (E polypeptide, protein-glutamine-gamma-glutamyltransferase) (TG3A3) mRNA
7642	17492		2.57	1.0E-70	A444252.1	EST_HUMAN	z64505.1 Soares testis NIH1 Homo sapiens cDNA clone IMAGE:797444 5'
8395	18182	28426	13.73	1.0E-70	AN738938.1	EST_HUMAN	AV738938.1 Soares testis NIH1 Homo sapiens cDNA clone GBL9310 5'

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit ELASTIC Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5621	15536	25621	6.04	9.0E-71	AI143870.1	EST_HUMAN	q04061.ct Sources: testis, NHT Homo sapiens cDNA clone IMAGE:1798009 3' similar to TR:O14045
5621	15536	25622	6.04	9.0E-71	AI143870.1	EST_HUMAN	O14045 PHOSPHOTRANSFERASE ; q04061.ct Sources: testis, NHT Homo sapiens cDNA clone IMAGE:1798009 3' similar to TR:O14045
6192	19077	29226	1.88	9.0E-71	AI065403.1	EST_HUMAN	W55245.6X1 NCL GCGAP GCG Homo sapiens cDNA clone IMAGE:2309288 3' similar to TR:P97213 P97213 CDU2, CDU1, TCCD, TCDB, TCDE, TCDD, TCDC, CDD2, CDD3, AND CDD4 GENES ;
8311	18077	26226	4.85	9.0E-71	AI065403.1	EST_HUMAN	W55245.6X1 NCL GCGAP GCG Homo sapiens cDNA clone IMAGE:2309288 3' similar to TR:P97213 P97213 CDU2, CDU1, TCCD, TCDB, TCDE, TCDD, TCDC, CDD2, CDD3, AND CDD4 GENES ;
7245	17122		1.97	9.0E-71	AA174451.1	EST_HUMAN	7527411.1t Shalagene neuroepithelium (8637291) Homo sapiens cDNA clone IMAGE:610101 5' similar to
6393	16226	28386	7.91	7.0E-71	AA142200.1	EST_HUMAN	TR:G143061 G1143061 STRAIN Y434 POL ;
7037	18674	27103	1.92	7.0E-71	AA105457.1	EST_HUMAN	2460920.1t Sources: testis, NHT Homo sapiens cDNA clone IMAGE:795075 5'
8643	18607	28786	4.78	7.0E-71	AA105457.1	EST_HUMAN	369105.51 Sources: fetal liver, spleen, TML S, S1 Homo sapiens cDNA clone IMAGE:462228 3'
2163	12050	21951	3.45	5.0E-71	AF065327.1	NT	Homo sapiens chlorococcin 21 segment H52(C010)
4050	13833	23710	1.38	5.0E-71	AF065327.1	EST_HUMAN	Homo sapiens SP100-HMG nuclear autoantigen (SP100) mRNA, complete cds
5144	18011	24782	3.2	5.0E-71	AA059466.1	EST_HUMAN	Q148310234.1t 1994-037-601 ST0284 Homo sapiens cDNA
5596	16501	25577	2.14	5.0E-71	4502740	NT	W1810121 NCL GCGAP URT Homo sapiens cDNA clone IMAGE:2425318 3'
8434	16295	26457	1.59	5.0E-71	M38108.1	NT	Homo sapiens cytochrome b (CYTB) mRNA
6548	16409	26585	49.78	5.0E-71	AF072810.1	NT	Human neurofibromin protein type 1 mRNA, 3' end of cds
7702	17552		2.26	5.0E-71	X13467.1	NT	Homo sapiens transcription factor W5TF mRNA, complete cds
8348	18225	28477	1.9	5.0E-71	11436514	NT	Human PrkA1 gene for Alzheimer's disease A1 amyloid protein precursor (cdon 2)
8578	18400	28988	2	5.0E-71	11436009	NT	Homo sapiens pro-platelet basic protein (includes platelet basic protein, beta-thromboglobulin, connective tissue-activating peptide III, neutrophil-activating peptide-2) (PBPF), mRNA
5097	18648	29116	1.84	5.0E-71	11417802	NT	Homo sapiens similar to hypothetical protein FLJ20163 (f4, sapiens) (LOC683325), mRNA
9411	15063		1.92	5.0E-71	11418039	NT	Homo sapiens calcitriol binding protein 1 (KIA0330), mRNA
97	10782	19609	1.13	4.0E-71	4507562	NT	Homo sapiens RNA binding motif protein 9 (RBM9), mRNA
347	10309	20123	115.63	4.0E-71	AF157026.1	NT	Homo sapiens tumor necrosis factor (ligand) superfamily, member 10 (TNFSF10) mRNA
347	10309	20124	115.63	4.0E-71	AF157026.1	NT	Equus caballus glyceraldehyde-3-phosphate dehydrogenase mRNA, partial cds
2850	12778	22598	0.88	4.0E-71	7705414	NT	Equus caballus glyceraldehyde-3-phosphate dehydrogenase mRNA, partial cds
2850	12778	22597	0.88	4.0E-71	7705414	NT	Homo sapiens hook1 protein (HOOK1), mRNA
2857	12785	22575	1.93	4.0E-71	4505860	NT	Homo sapiens hook1 protein (HOOK1), mRNA
4633	14227	24039	3.51	4.0E-71	AF056922.1	NT	Homo sapiens plasmalogen (PLG) mRNA
4913	14792	24597	4.96	4.0E-71	7657602	NT	Homo sapiens SP100 HMG nuclear autoantigen (SP100) mRNA, complete cds Homo sapiens putative home-binding protein (SOUL), mRNA

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8077	17968	28278	3.32	3.0E-71	A1557883.1	EST_HUMAN	h43010.01 NCI_GCAP_F44 Homo sapiens cDNA clone IMAGE:1043063 similar to contains PTR5.15 PTR5 repetitive element;
1210	11119	20968	2.82	2.0E-71	AL163206.2	NT	Homo sapiens chromosome 21 segment HS21C066
5259	15181	24957	6.66	2.0E-71	D87482.1	NT	Human mRNA for KIAA0272 gene, partial cds
5259	15181	24959	6.96	2.0E-71	D87482.1	NT	Human mRNA for KIAA0272 gene, partial cds
8022	17872	28114	2.56	2.0E-71	AF095703.1	NT	Homo sapiens short chain L3-hydroxyacyl-CoA dehydrogenase precursor (HADHSC) gene, nuclear gene encoding mitochondrial protein, complete cds
8022	17872	28115	2.90	2.0E-71	AF095703.1	NT	Homo sapiens short chain L3-hydroxyacyl-CoA dehydrogenase precursor (HADHSC) gene, nuclear gene encoding mitochondrial protein, complete cds
8079	17970	28216	2.3	2.0E-71	BE018477.1	EST_HUMAN	h43010.01 NCI_GCAP_F44 Homo sapiens cDNA clone IMAGE:1043063 similar to contains PTR5.15 PTR5 repetitive element;
9191	18920		0.22	2.0E-71	T95486.1	EST_HUMAN	h43010.01 NCI_GCAP_F44 Homo sapiens cDNA clone IMAGE:1043063 similar to contains PTR5.15 PTR5 repetitive element;
622	10550	20371	2.11	1.0E-71	A077927.1	EST_HUMAN	h43010.01 NCI_GCAP_F44 Homo sapiens cDNA clone IMAGE:1043063 similar to contains PTR5.15 PTR5 repetitive element;
926	10881	20659	1.93	1.0E-71	7708281	NT	Homo sapiens neuronal cell death-related protein (LOC551510) mRNA
1084	11020	20841	4.01	1.0E-71	AF29580.1	NT	Homo sapiens disabled-2 gene, exon 2 through 15 and complete cds
1317	11234	21050	10.56	1.0E-71	AF012872.1	NT	Homo sapiens phosphatidylinositol 4-kinase 250 (pIK250) mRNA, complete cds
2036	11927	21821	1.33	1.0E-71	AB047007.1	NT	Homo sapiens PUSL16 mRNA, partial cds
2036	11927	21822	1.23	1.0E-71	AB047007.1	NT	Homo sapiens PUSL16 mRNA, partial cds
2631	12528	22416	4.85	1.0E-71	7657163	NT	Homo sapiens hairy enhancer of split related with YRPW motif-like (HEYL) mRNA
3467	13373	23176	1.77	1.0E-71	AF116665.1	NT	Homo sapiens inorganic pyrophosphatase mRNA, complete cds
3546	13462	23256	4.73	1.0E-71	AF246219.1	NT	Homo sapiens SNARE protein kinase SNAX mRNA, complete cds
3546	13462	23257	4.73	1.0E-71	AF246219.1	NT	Homo sapiens SNARE protein kinase SNAX mRNA, complete cds
3597	13511	23268	0.84	1.0E-71	BE122850.1	EST_HUMAN	h43010.01 NCI_GCAP_F44 Homo sapiens cDNA clone IMAGE:1043063 similar to contains PTR5.15 PTR5 repetitive element;
3597	13511	23269	0.94	1.0E-71	BE122850.1	EST_HUMAN	h43010.01 NCI_GCAP_F44 Homo sapiens cDNA clone IMAGE:1043063 similar to contains PTR5.15 PTR5 repetitive element;
3651	13595	23381	1.87	1.0E-71	AF218904.1	NT	Human epidermal keratinocyte Subtraction Library: Upregulated Transcripts Homo sapiens cDNA clone 02, 15 5' similar to Homo sapiens chromosome 19
4370	14266	24050	1.86	1.0E-71	D28476.1	NT	Human mRNA for KIAA0045 gene, complete cds
6044	15947	29079	1.4	1.0E-71	11426182	NT	Homo sapiens GGN5 gene, partial cds
6326	16189	29351	10.02	1.0E-71	U80753.1	NT	Homo sapiens GGN5 gene, partial cds
6750	16629	29816	6.95	1.0E-71	11425430	NT	Homo sapiens myomesin (M-protein) (MYOM2) mRNA
6916	16794	29946	4.18	1.0E-71	892281.1	NT	Homo sapiens hypothetical protein FLJ10598 (F_10598) mRNA

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Description
6916	16794	26987	4.18	1.0E-71	8822811	NT	Homo sapiens hypothetical protein FLJ10998 (FLJ10998), mRNA
7748	17968	27820	6.49	1.0E-71	AY007043.1	NT	Homo sapiens cytochrome c oxidase subunit VII-related protein gene, complete cds
7792	17942		3.39	1.0E-71	AV761217.1	EST_HUMAN	AV761217 MOS Homo sapiens cDNA clone MDSEIA03 5'
8164	18952		4.87	1.0E-71	AV761217.1	EST_HUMAN	AV761217 MOS Homo sapiens cDNA clone MDSEIA03 5'
8256	18136	28883	3.2	1.0E-71	11418603	NT	Homo sapiens coagulation factor XIII, A1 polypeptide (F13A1), mRNA
8486	18359	28623	2.33	1.0E-71	11417191	NT	Homo sapiens leucylcystinyl aminopeptidase (LNPEP), mRNA
8486	18359	28624	2.33	1.0E-71	11417191	NT	Homo sapiens leucylcystinyl aminopeptidase (LNPEP), mRNA
9547	19147		4.48	1.0E-71	NB011395.1	NT	Homo sapiens gene for AF-6, complete cds
401	10447	20173	1.16	9.0E-72	AB57635.1	EST_HUMAN	wig503.x1 NGL CGAP Lu19 Homo sapiens cDNA clone IMAGE:2423188 3' similar to TR:08705 O86705
401	10447	20174	1.16	9.0E-72	AB57635.1	EST_HUMAN	wig503.x1 NGL CGAP Lu19 Homo sapiens cDNA clone IMAGE:2423188 3' similar to TR:08705 O86705
4023	13926	23700	5.23	7.0E-72	4501809	NT	HYPOTHETICAL 38.6 KD PROTEIN, contains AU repetitive element;
4023	13926	23701	5.23	7.0E-72	4501809	NT	Homo sapiens acetylase 2, mitochondrial (AC02), nuclear gene encoding mitochondrial protein, mRNA
4023	13926	23702	5.23	7.0E-72	4501809	NT	Homo sapiens acetylase 2, mitochondrial (AC02), nuclear gene encoding mitochondrial protein, mRNA
8228	18954	28244	2.84	7.0E-72	S41694.1	NT	(pseudogene) PTMAMP2 orthologous alpha (Pseudogene), 182 nt, segment 2 of 3
8685	16794		3.72	6.0E-72	AL13346.2	NT	Homo sapiens chromosome 21 segment 13346.2
8798	18603	26983	2.22	6.0E-72	BF365978.1	EST_HUMAN	76380331 NGL CGAP_G03 Homo sapiens cDNA clone IMAGE:340080 3' similar to SW:KMLC_048101
96	10043	10954	0.88	5.0E-72	BF333707.1	EST_HUMAN	P07919 MYOIN LIGHT CHAIN MYOSE, SKELETAL MUSCLE 1
66	10043	10955	0.88	5.0E-72	BF333707.1	EST_HUMAN	QV0-C50010-16000-395-nt1 C50010 Homo sapiens cDNA
57	10043	10954	2.95	5.0E-72	BF333707.1	EST_HUMAN	QV0-C50010-16000-395-nt1 C50010 Homo sapiens cDNA
57	10043	10955	2.95	5.0E-72	BF333707.1	EST_HUMAN	QV0-C50010-16000-395-nt1 C50010 Homo sapiens cDNA
1122	11037		2.76	5.0E-72	L11646.1	NT	Homo sapiens alpha-tubulin mRNA, complete cds
16023	26163		1.47	5.0E-72	AU12684.1	EST_HUMAN	AU12684 212P2 Homo sapiens cDNA clone N72P2002761 5'
7097	16974	27167	3.55	5.0E-72	AF161274.1	EST_HUMAN	af6003.y1 Schneider feld brain 00004 Homo sapiens cDNA clone IMAGE:278264 5' similar to
8590	18437	28700	3.18	5.0E-72	BF331571.1	EST_HUMAN	TR:039785 039785 Homo sapiens cDNA clone IMAGE:278264 5' similar to
8590	18437	28707	3.18	5.0E-72	BF331571.1	EST_HUMAN	MR4-BT03698-010600-005-405 BT03698 Homo sapiens cDNA
9293	19700		2.43	5.0E-72	BE926645.1	EST_HUMAN	MR4-BT03698-010600-005-405 BT03698 Homo sapiens cDNA
							QV1-BT03632-280800-342-nt10 BT03632 Homo sapiens cDNA

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4716	14802		1.96	4.05-72	11034844	NT	Homo sapiens hypothetical protein c11057/B20.2 (U1057/B20.2), mRNA
6380	16242	26402	1.4	4.05-72	572967	NT	Homo sapiens hsd domain and RLD 2 (HERC2), mRNA
7633	17464	27705	1.42	4.05-72	892909	NT	Homo sapiens hypothetical protein FLJ20758 (FLJ20758), mRNA
8815	18628	28917	7.32	4.05-72	H79421.1	EST_HUMAN	Y12803.1 Scores fetal liver spleen INFLS Homo sapiens cDNA clone IMAGE:285084 5'
8928	18737	29030	2.76	4.05-72	181910.1	EST_HUMAN	Y23209.1 Scores fetal liver spleen INFLS Homo sapiens cDNA clone IMAGE:106949 3'
8903	19185	28546	4.2	4.05-72	AJ27546.2	NT	Homo sapiens WEE1, gene for protein kinase and partial ZNF143 gene for zinc finger transcription factor
885	10811		4.88	3.05-72	AJ723823.1	EST_HUMAN	af163a06.a1 Scores, testis, NHT Homo sapiens cDNA clone 1310280 3'
1139	11053	20894	6.06	3.05-72	U16906.1	NT	Human chondroin sulfate proteoglycan versican V0 splice-variant precursor peptide mRNA, complete cds
1130	11053	20895	6.06	3.05-72	U16906.1	NT	Human chondroin sulfate proteoglycan versican V0 splice-variant precursor peptide mRNA, complete cds
9037	12065	22769	10.51	3.05-72	AJ226043.1	NT	Homo sapiens 959 kb contig between AML1 and CBRT1 on chromosome 21 (22, segment 3/3)
3241	13184	22063	2.63	3.05-72	8023548	NT	Homo sapiens hypothetical protein FLJ20585 (FLJ20585), mRNA
3750	13983	23445	2.81	3.05-72	S77598.1	NT	TCR V delta 2-G alpha-T cell receptor delta and C alpha fusion gene (alternatively spliced, splice junction)
4435	14336	24126	3.22	3.05-72	11416166	NT	[human, precursor B-cell line SEH, mRNA Part4, 211 nt]
4635	14717	24500	0.94	3.05-72	AJ64337.1	EST_HUMAN	Homo sapiens hypothetical protein (FLJ1127), mRNA
8639	15522	26943	2.4	3.05-72	AF073567.1	NT	wk31a08.1 NCJ C63AP G08 Homo sapiens cDNA clone IMAGE:280754 3'
8639	15522	26943	2.4	3.05-72	AF073567.1	NT	Homo sapiens growth factor receptor-bound protein 10 (GRB10), gene, exon 5
8743	15531	25756	4.35	3.05-72	AB52304.1	NT	Homo sapiens mRNA for KIAA1081 protein, partial cds
8743	15531	25759	4.35	3.05-72	AB52304.1	NT	Homo sapiens mRNA for KIAA1081 protein, partial cds
5968	15863	26016	3.02	3.05-72	462697	NT	Homo sapiens ribosomal protein L3-like (RPL3), mRNA
8475	16334	26591	2.22	3.05-72	U80017.1	NT	Homo sapiens basic transcription factor 2 p44 (b2p44) gene, partial cds, neuronal apoptosis inhibitory protein (naip) and survival motor neuron protein (smn) genes, complete cds
6755	16534	26822	1.26	3.05-72	5031802	NT	Homo sapiens nuclear receptor subfamily 1, group H, member 3 (NR1H3), mRNA
7950	17810	29051	1.3	3.05-72	X93260.1	NT	Homo sapiens S100A12 gene for Calgranulin C, exon 2 and joined cds
9516	18129	29262	1.85	3.05-72	AB011389.1	NT	Homo sapiens gene for AF-6, complete cds
8122	18010	28257	4.45	2.05-72	AJ789277.1	EST_HUMAN	428008.s1 Scores, testis, NHT Homo sapiens cDNA clone 1301609 3' similar to gb:202067 H sapiens mRNA for 7SL RNA pseudogene (HUMAN);
9600	18182	25246	3.74	2.05-72	AF182714.1	NT	Rattus norvegicus putative phosphatidylinositol-3-OH kinase translocator cDNA, complete cds
2030	11921	21812	2.91	1.05-72	AA546226.1	EST_HUMAN	af8302.s1 Scores, parathyroid, tumor, NHPHA Homo sapiens cDNA clone IMAGE:1387390 3'
5524	15441	29505	3.15	1.05-72	7851676	NT	Homo sapiens vacuolar protein sorting 41 (yeast homolog) (VPS41), mRNA
5949	15854	25976	19.78	1.05-72	11321578	NT	Homo sapiens myosin, heavy polypeptide 13, skeletal muscle (MYH13), mRNA



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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Meat Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5948	13844	28977	19.76	1.0E-72	11321576	NT	Homo sapiens myosin, heavy polypeptide 13, skeletal muscle (MYH13), mRNA
6501	13900	28933	3.82	1.0E-72	BE179434.1	EST_HUMAN	RC4-HT0576-170300-012-g02 HT0578 Homo sapiens cDNA
6501	16360	28934	3.82	1.0E-72	BE179434.1	EST_HUMAN	RC4-HT0576-170300-012-g02 HT0578 Homo sapiens cDNA
7532	17363	27964	6.06	1.0E-72	AF22742.1	NT	Homo sapiens synaptic glycoprotein SC2 (SC2), mRNA, complete cds
7532	17363	27965	6.06	1.0E-72	AF22742.1	NT	Homo sapiens synaptic glycoprotein SC2 (SC2), mRNA, complete cds
1443	11348	21213	1.23	9.0E-73	AW374968.1	EST_HUMAN	MRO-CT0063-071090-002-H11 CT0063 Homo sapiens cDNA
8020	18197		23.9	9.0E-73	11424056	NT	Homo sapiens ribosomal protein L13a (RPL13A), mRNA
1022	10939	20782	1.03	8.0E-73	AW071755.1	EST_HUMAN	w55505.v1 NGL CGAP_Bnc25 Homo sapiens cDNA clone IMAGE:2501098.3? similar to TRC86050
1399	11304	21163	3.06	8.0E-73	A024877.1	EST_HUMAN	Q58U06 HYPOTHETICAL PROTEIN MJ1586 ;
5959	15864	25998	4.6	8.0E-73	11439446	NT	alpha5905.3 of Soares, Iacis, NHT Homo sapiens cDNA clone IMAGE:1639743.3?
6716	16593	26765	2	8.0E-73	AF113126.1	NT	Homo sapiens vesicular ATPase isoform VA38 mRNA, complete cds
7395	17254	27459	15.86	8.0E-73	BE019000.1	EST_HUMAN	h62206.v1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3030034.5? similar to gb:Y04988.cds1 ACTIN, CYTOSOLIC, MUSCLE 2 (HUMAN), gb:Y04988 Mus musculus skeletal gamma-actin mRNA, complete cds (MOUSE);
7974	17468	27662	2.22	8.0E-73	11626037	NT	Homo sapiens interleukin 12 receptor, beta 1 (IL12RB1), mRNA
7974	17468	27662	2.22	8.0E-73	11626037	NT	Homo sapiens interleukin 12 receptor, beta 1 (IL12RB1), mRNA
9446	19081	25282	2.12	8.0E-73	AB002599.1	NT	Homo sapiens DNA for Human P200, complete cds
9554	19277	25235	2.66	8.0E-73	11471816	NT	Homo sapiens thyroid autoantigen TPO (Cu antigen) (G22P1), mRNA
1118	11033	20376	0.76	7.0E-73	8923250	NT	Homo sapiens hypochlorin protein FLJ20367 (FLJ20369), mRNA
3391	13184	22983	1.06	7.0E-73	AL103206.2	NT	Homo sapiens chromosome 21 segment HS21C008
4863	14743		1.62	7.0E-73	AL103206.2	NT	Homo sapiens chromosome 21 segment HS21C008
152	10120		2.37	7.0E-73	AL103216.2	NT	Homo sapiens chromosome 21 segment HS21C018
6255	16121	26274	3.30	6.0E-73	BE166574.1	EST_HUMAN	QVCH-TD0494-020300-137-d03 HT0494 Homo sapiens cDNA
6215	15138	24832	2.05	4.0E-73	11427159	NT	Homo sapiens HELG protein (FAM441), mRNA
1818	11715	21954	0.99	3.0E-73	11435913	NT	Homo sapiens ferritin-binding protein (FEBP), mRNA
1818	11715	21954	0.99	3.0E-73	11435913	NT	Homo sapiens ferritin-binding protein (FEBP), mRNA
833	10760	20910	1.75	2.0E-73	AF135997.1	NT	Homo sapiens BASS1 (BASS1) mRNA, partial cds
1802	11768		1.48	2.0E-73	AW88081.1	EST_HUMAN	RCS-NN0066-270400-011-c04 NN0066 Homo sapiens cDNA
2251	12135		1.1	2.0E-73	U01317.1	NT	Human beta globin region on chromosome 11
3144	13069	22869	3.48	2.0E-73	4602562	NT	Homo sapiens caspase 8, apoptosis-related cysteine protease (CASP8) mRNA
3933	13420	23221	0.96	2.0E-73	7699539	NT	Homo sapiens Parkinson disease (autosomal recessive, juvenile) 2, parkin (PARK2), transcript variant 3, mRNA

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3503	13420	23222	0.96	2.0E-73	7699596	NT	Homo sapiens Parkinson disease (autosomal recessive, juvenile 2, parkin (PRK2), transcript variant 3, mRNA
5002	15909	25533	0.76	2.0E-73	AB046811.1	NT	Homo sapiens mRNA for KIAA1891 protein, partial cds
8023	15027	26056	1.35	2.0E-73	11431471	NT	Homo sapiens Interleukin 4 receptor (IL4R), mRNA
8023	15027	26056	1.35	2.0E-73	11431471	NT	Homo sapiens Interleukin 4 receptor (IL4R), mRNA
7696	17608	26048	1.34	2.0E-73	4504188	NT	Homo sapiens glutathione synthetase (GSS) mRNA
7693	17643	26065	2.45	2.0E-73	11469980	NT	Homo sapiens superinilin (SVIL), transcript variant 1, mRNA
7693	17643	26068	2.45	2.0E-73	11469980	NT	Homo sapiens superinilin (SVIL), transcript variant 1, mRNA
8198	18028	28272	4.14	2.0E-73	11431588	NT	Homo sapiens KIAA1030 protein, Golgi-associated, gamma-adaptin ear containing, ARF-binding protein 2 (KIAA1030), mRNA
8408	18384	28537	3.79	2.0E-73	4557612	NT	Homo sapiens galactose-4-epimerase (GalE), mRNA
8408	18384	28538	3.79	2.0E-73	4557612	NT	Homo sapiens galactose-4-epimerase (GalE), mRNA
8432	18305	28582	1.73	2.0E-73	AB028921.1	NT	Homo sapiens mRNA for KIAA1059 protein, partial cds
8447	11708	21512	1.72	2.0E-73	AW59393.1	EST_HUMAN	RC3-NU0095-27600-001-041 NM0068 Homo sapiens cDNA
2434	12311	22207	0.97	1.0E-73	AU121865.1	EST_HUMAN	AU121865 MANNA1 Homo sapiens cDNA clone MANNA100460.5
7469	17529	27934	1.39	1.0E-73	AF14727.1	EST_HUMAN	Gallus gallus Dact3 protein (Dact3) mRNA, complete cds
8747	17890	28140	2.67	1.0E-73	BE365477.1	EST_HUMAN	MEK22 repetitive element;
723	10855	20495	1.39	8.0E-74	4557426	EST_HUMAN	601270271F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3817105.5
8500	15521	25502	1.84	8.0E-74	S83194.1	NT	Homo sapiens CD39-like 4 (CD39L4) mRNA
8500	15521	25503	1.84	8.0E-74	S83194.1	NT	Homo sapiens CD39-like 4 (CD39L4) mRNA
11905	11801	21979	3.01	7.0E-74	AJ001098.1	NT	Ca2+/calmodulin-dependent protein kinase IV kinase isoform [rat, brain, mRNA, 3429 nt]
3295	13207	23007	0.99	7.0E-74	AL033462.2	NT	Homo sapiens NKX2D gene, exon 10
7327	17231	27432	2	7.0E-74	BE360432.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS210046
9533	18216	28234	2.81	7.0E-74	BE360903.1	EST_HUMAN	601946294F1 NIH_MGC_73 Homo sapiens cDNA clone IMAGE:3932967.5
1106	11022	20895	2.95	6.0E-74	AF109007.1	EST_HUMAN	601946294F1 NIH_MGC_73 Homo sapiens cDNA clone IMAGE:3932967.5
1059	11514	21373	1.03	6.0E-74	AW263177.1	EST_HUMAN	Homo sapiens S164 gene, partial cds; P51 and hypophthal protein genes, complete cds; and S171 gene, partial cds
2658	12182	22050	0.99	6.0E-74	BE386290.1	EST_HUMAN	xm7597.x1 Soares_NFL_1_CBE3 S1 Homo sapiens cDNA clone IMAGE:2706536.3
2258	12152	22051	0.98	6.0E-74	BE386290.1	EST_HUMAN	601283521F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3905453.5
2654	12162	22052	1.36	6.0E-74	AW014039.1	EST_HUMAN	601283521F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3905453.5
2834	12162	22054	1.39	6.0E-74	AW014039.1	EST_HUMAN	UHH-80c-sh-H-03-QJ1 at NCI CGAP_Sut1 Homo sapiens cDNA clone IMAGE:2709505.3
3552	13565	23352	2.83	6.0E-74	BE34846.1	EST_HUMAN	UHH-80c-sh-H-03-QJ1 at NCI CGAP_Sut1 Homo sapiens cDNA clone IMAGE:2709505.3
							h54e1.1 x1 NCI CGAP_KR11 Homo sapiens cDNA clone IMAGE:313232.3

Table 4

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) BLAST Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Description
3652	13866	23383	2.83	6.0E-74	BE048846.1	EST_HUMAN	hF451.1x1 NCI CGAP_Ku81 Homo sapiens cDNA clone IMAGE3132332.3'
6294	15216	25016	2.49	6.0E-74	11098013	NT	Homo sapiens actin filament associated protein (AFAP), mRNA
6887	10813	20061	2.88	5.0E-74	AV020598.1	EST_HUMAN	Homo sapiens actin filament associated protein (AFAP), mRNA
2699	12834		5.19	5.0E-74	AA392796.1	EST_HUMAN	PMO-CT0298-27109-007-H07 CT0298 Homo sapiens cDNA
6320	16240	25046	2.16	5.0E-74	11429417	NT	Homo sapiens phosphatidylinositol glycan, class L (PIGL), mRNA
5539	15459	25026	10.48	5.0E-74	268970.1	NT	H sapiens mRNA for TPCP16 protein
6663	15479	25552	6.74	5.0E-74	4507896	NT	Homo sapiens VAMP (vesicle-associated membrane protein)-associated protein A (33kD) (VAPA) mRNA, and translated products
6002	15510	25594	1.85	5.0E-74	11431471	NT	Homo sapiens Interleukin 4 receptor (IL4R), mRNA
6002	15516	25595	1.85	5.0E-74	11431471	NT	Homo sapiens Interleukin 4 receptor (IL4R), mRNA
6120	19014	28152	3.73	5.0E-74	7602263	NT	Homo sapiens KIAA00716 gene product (KIAA0716), mRNA
9554	16594	20755	2.09	5.0E-74	11346433	NT	Homo sapiens hypothetical protein FLJ13222 (FLJ13222), mRNA
8117	18008	28262	1.88	5.0E-74	Y09420.1	NT	H sapiens mRNA for HIP-1
8117	18008	28262	1.88	5.0E-74	Y09420.1	NT	H sapiens mRNA for HIP-1
278	10243	20063	1.89	4.0E-74	D38792.1	NT	Homo sapiens cDNA for amyloid precursor protein, complete cds
834	10761	20511	4.95	4.0E-74	AB028492.1	NT	Homo sapiens mRNA for KIAA1016 protein, partial cds
1916	1814	21682	2.44	4.0E-74	AB028988.1	NT	Homo sapiens cDNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
1916	1814	21683	2.44	4.0E-74	AB028988.1	NT	Homo sapiens cDNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
2027	1918	21808	4.34	4.0E-74	4500182	NT	Homo sapiens proteasome (prosome, macropain) subunit, beta type, 1 (PSMB1) mRNA
2027	1918	21809	4.34	4.0E-74	4500182	NT	Homo sapiens proteasome (prosome, macropain) subunit, beta type, 1 (PSMB1) mRNA
2005	19176	21870	1.21	4.0E-74	AB033994.1	NT	Homo sapiens mRNA for KIAA1169 protein, partial cds
2377	12257	22149	0.99	4.0E-74	AJ006976.1	NT	Homo sapiens PTP gene
3002	12979	22772	4.44	4.0E-74	AJ006976.1	NT	Homo sapiens PTP gene
3483	13399	23204	0.93	4.0E-74	AL183210.2	NT	Homo sapiens chromosome 21 segment HS21C010
3973	13880	23655	1.31	4.0E-74	AL183217.2	NT	Homo sapiens chromosome 21 segment HS21C047
4487	14361	24142	1.67	4.0E-74	7602183	NT	Homo sapiens KIAA0569 gene product (KIAA0569), mRNA
4512	14405	24162	0.82	4.0E-74	Z17227.1	NT	Homo sapiens mRNA for transmembrane receptor protein
6006	14880	24644	3.76	4.0E-74	4504326	NT	Homo sapiens hydroxyacyl-Coenzyme A dehydrogenase-3-ketocacyl-Coenzyme A thioesterase-Coenzyme A hydratase (trifunctional protein), beta subunit (HADHB), mRNA
6006	14880	24645	3.76	4.0E-74	4504326	NT	Homo sapiens hydroxyacyl-Coenzyme A dehydrogenase-3-ketocacyl-Coenzyme A thioesterase-Coenzyme A hydratase (trifunctional protein), beta subunit (HADHB), mRNA
6977	16854		5.03	3.0E-74	AA300378.1	EST_HUMAN	EST113131 Thymus tumor III Homo sapiens cDNA 5' end similar to similar to ribosomal protein L37

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7394	17312	27519	2.42	3.0E-74	M76904.1	EST_HUMAN	EST01132 Subtracted Hippocampus, Stratagene (cat. #930205) Homo sapiens cDNA clone HHOPR91
7321	17771	28010	2.22	3.0E-74	AA007493.1	EST_HUMAN	ncr7605.f1 NCI CGAP Prior Homo sapiens cDNA clone IMAGE:110384 3'
942	10887	20714	126.24	2.0E-74	7689491	NT	Homo sapiens glyceraldehyde-3-phosphate dehydrogenase (GAPD), mRNA
942	10887	20715	126.24	2.0E-74	7689491	NT	Homo sapiens glyceraldehyde-3-phosphate dehydrogenase (GAPD), mRNA
1158	11071	20918	1.01	2.0E-74	AF020062.1	NT	Human endogenous retrovirus HERV-K-147D
1224	11132	20986	1.15	2.0E-74	AB60028.1	EST_HUMAN	w51547.x1 NCI CGAP Lu08 Homo sapiens cDNA clone IMAGE:2547204 3' similar to SW.G035_HUMAN
1577	11481	21340	2.04	2.0E-74	4885108	NT	Homo sapiens epidermal growth factor receptor (avian erythroblastic leukemia viral (v-erb-b) oncogene homolog) (EGFR) mRNA
1577	11481	21341	2.94	2.0E-74	4885108	NT	Homo sapiens epidermal growth factor receptor (avian erythroblastic leukemia viral (v-erb-b) oncogene homolog) (EGFR) mRNA
2558	12430	22323	1.09	2.0E-74	AB57280.1	EST_HUMAN	P12.1, 15, G11, 2, tumor2 Homo sapiens cDNA 3'
4837	14813	24852	1.95	2.0E-74	AL155092.1	NT	Novel human gene mapping to chromosome 22
4837	14813	24853	1.95	2.0E-74	AL155092.1	NT	Novel human gene mapping to chromosome 22
4942	14820	24888	1.80	2.0E-74	U03983.1	NT	Human pituitary glycoprotein (hPit) mRNA, 3' end
6543	19148	26530	1.84	2.0E-74	BE711134.1	EST_HUMAN	RC6-H0076-236500-011 C03 HT0078 Homo sapiens cDNA
5584	19148	25854	1.86	2.0E-74	11438587	NT	Homo sapiens PDZ75 protein (PDZ75NT-CO-38), mRNA
5584	19148	25854	1.86	2.0E-74	11438587	NT	Homo sapiens PDZ75 protein (PDZ75NT-CO-38), mRNA
5520	19148	25854	2.57	2.0E-74	11438587	NT	Homo sapiens PDZ75 protein (PDZ75NT-CO-38), mRNA
5520	19148	25855	2.57	2.0E-74	11438587	NT	Homo sapiens PDZ75 protein (PDZ75NT-CO-38), mRNA
6219	16065	26235	1.55	2.0E-74	BF007865.1	EST_HUMAN	50155/52471 NIH MGC_38 Homo sapiens cDNA clone IMAGE:382754a 5'
6631	16511	26700	1.43	2.0E-74	AB037816.1	NT	Homo sapiens mRNA for KIA1955 protein, partial cds
7398	17316	27523	6.54	2.0E-74	AL103204.2	EST_HUMAN	Homo sapiens chromosome 21 segment HS21004
9387	19647	28177	1.46	2.0E-74	AA108181.1	EST_HUMAN	z95806.s1 Stratagene mouse 837209 Homo sapiens cDNA clone IMAGE:628018 3'
9503	19890	29195	1.26	2.0E-74	BF089568.1	EST_HUMAN	602121429F1 NIH MGC_55 Homo sapiens cDNA clone IMAGE:3278559 5'
47	10035	19841	0.97	1.0E-74	7677934	EST_HUMAN	Homo sapiens Misshapen/NIM-related kinase (MINK), mRNA
334	10293	20108	3.6	1.0E-74	AW819405.1	EST_HUMAN	QVA-ST0234-181159-037-005 ST0234 Homo sapiens cDNA
491	10434	20247	1.19	1.0E-74	8922826	NT	Homo sapiens hypothetical protein FLJ11028 (FLJ11028), mRNA
497	10439	20262	2.7	1.0E-74	X02344.1	NT	Homo sapiens beta 2 gene
586	10524	20331	1.35	1.0E-74	4508020	NT	Homo sapiens zinc finger protein 259 (ZNF259) mRNA
983	10005	20751	2.17	1.0E-74	AL163245.2	NT	Homo sapiens chromosome 21 segment HS21C045
2179	12068	21968	6.19	1.0E-74	AB020060.1	NT	Homo sapiens DNA for Human P20X, complete cds
3100	13026	22822	5.95	1.0E-74	4768897	NT	Homo sapiens mannosidase, alpha, class 2A, member 1 (MAN2A1), mRNA

### Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3837	33768	23594	4.56	1.0E-74	AL163268.2	NT	Human sapiens chromosome 21 segment HS21C008
3874	33881	23656	0.9	1.0E-74	BC030380.1	EST_HUMAN	RC22105642-2703000-019-105 BT0642 Homo sapiens cDNA
4170	14070	23845	0.9	1.0E-74	BE467768.1	EST_HUMAN	ht373808.x1 NCJ_OGAP_Lu24 Homo sapiens cDNA clone IMAGE:3129583 3' similar to WIP-B0511.12
5112	14890	24754	1.16	1.0E-74	BC034027.1	EST_HUMAN	Homo sapiens DHRT1 mRNA, partial cds
5964	16574	26765	1.83	1.0E-74	BE448106.1	EST_HUMAN	RC07070008F1.NH1.MGC.12 Homo sapiens cDNA clone IMAGE:3465260 5'
6914	16590	26766	1.83	1.0E-74	BE448105.1	EST_HUMAN	RC07070008F1.NH1.MGC.12 Homo sapiens cDNA clone IMAGE:3465260 5'
7112	16580	27182	3.92	1.0E-74	AF214924.1	EST_HUMAN	Homo sapiens tracheal epithelium enriched protein (TREP) cDNA, complete cds
7988	17833	26078	1.31	1.0E-74	11420549	NT	Homo sapiens hypochlorite S-transferase theta 2 (GSTT2). mRNA
9024	18918	29108	1.6	1.0E-74	11417856	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2). mRNA
9106	18973		2.83	1.0E-74	11417856	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2). mRNA
9249	12068	21968	4.14	1.0E-74	AB002089.1	NT	Homo sapiens DNA for Human P2021, complete cds
9720	19261		1.36	1.0E-74	AF240786.1	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds
2607	12475		4.07	8.0E-76	AF175238.1	NT	Homo sapiens DNA cytochrome-5 methyltransferase 3B (DNMT3B). mRNA, complete cds
6406	19059		1.67	9.0E-76	AL163202.2	NT	Homo sapiens chromosome 21 segment HS21C002
2273	12167	22055	0.88	6.0E-76	AB174181.1	EST_HUMAN	wk3808.x1 NCJ_OGAP_P122 Homo sapiens cDNA clone IMAGE:2417954 3' similar to gb:U14129_c644
5126	14695		0.66	6.0E-76	AB076235.1	EST_HUMAN	RETROVIRUS-related POL POLYPROTEIN (HUMAN);
5102	14970	24748	1.04	6.0E-76	BE441305.1	EST_HUMAN	a2c5c3g.x1 Scores, testing, NH1.MGC.12 Homo sapiens cDNA clone 1391028 3' similar to TR-Q15377 Q15377 Y-
7395	17913	27520	1.22	6.0E-76	BF960241.1	EST_HUMAN	CHROMOSOME RNA RECOGNITION MOTIF PROTEIN;
							MFO-SN0004-38000-006-200 SN0040 Homo sapiens cDNA
							RC07186616T1.NH1.MGC.49 Homo sapiens cDNA clone IMAGE:4268738 3'
							83161241 NCJ_OGAP_C08 Homo sapiens cDNA clone IMAGE:2242399 3' similar to TR-P03681 P03681
							HYPOPHYSICAL. 2, 10 KO PROTEIN;
7876	17726	27066	3.1	5.0E-76	AB086293.1	EST_HUMAN	CY1A-BT0632-210200-079-202 BT0632 Homo sapiens cDNA
107	10388	19023	1.05	4.0E-76	BC068333.1	EST_HUMAN	yc05h08.x1 Scores melanocyte ZINC-H1 Homo sapiens cDNA clone IMAGE:260065 5'
451	10395		1.23	4.0E-76	NC039737.1	EST_HUMAN	CACD-N0308F1.195400-355-411 NN0307 Homo sapiens cDNA
1728	11028	24484	1.5	4.0E-76	AF897280.1	EST_HUMAN	RC07039008F1.NH1.MGC.21 Homo sapiens cDNA clone IMAGE:363844 5'
2818	12747	22540	4.65	4.0E-76	BE404841.1	EST_HUMAN	Homo sapiens autolytic translation initiation factor 3, subunit B (T10D) (EIF3B). mRNA
5702	15698	26506	1.26	4.0E-76	55791457	NT	Homo sapiens nucleolar protein 1 (NUP50). mRNA
6082	15693	26084	1.50	4.0E-76	11417948	NT	Homo sapiens NIPSNAP, C. elegans, homolog 1 (NIPSNAP1). mRNA
5052	15653	26085	1.96	4.0E-76	11417948	NT	Homo sapiens NIPSNAP, C. elegans, homolog 1 (NIPSNAP1). mRNA
8072	17663	29214	8.72	4.0E-76	76960505	NT	Homo sapiens myosin, heavy polypeptide 1, skeletal muscle, adult (MYH1). mRNA
986	10909	20754	2.91	3.0E-76	AF157623.1	NT	Homo sapiens HTRA serine protease (PRSS11) gene, complete cds
587	10909	20754	2.91	3.0E-76	AF157623.1	NT	Homo sapiens HTRA serine protease (PRSS11) gene, complete cds

Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORE SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1796	11693	21869	1.98	3.0E-75	AB011183.1	NT	Homo sapiens mRNA for KIAA0817 protein, partial cds
2065	11955	21852	1.05	3.0E-75	4907334	NT	Homo sapiens synaptotagmin 1 (SYN1), mRNA
2373	12263	22144	3.69	3.0E-75	4756193	NT	Homo sapiens synaptosomal-associated protein, 250kD (SNAP-25) mRNA
2688	12616	22711	1.19	3.0E-75	AL163201.2	NT	Homo sapiens chromosome 21 segment HS2; O001
3152	13077	22877	1.33	3.0E-75	AB011183.1	NT	Homo sapiens mRNA for KIAA0817 protein, partial cds
3306	13227	23030	1.01	3.0E-75	N72383.1	NT	Human calcium-dependent phospholipid-binding protein (PLA2) mRNA, complete cds
3306	13227	23031	1.01	3.0E-75	N72383.1	NT	Human calcium-dependent phospholipid-binding protein (PLA2) mRNA, complete cds
4077	13679	23765	1.43	3.0E-75	D31676.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
4336	14233	24015	0.95	3.0E-75	7862421	NT	Homo sapiens KIAA0971 protein (KIAA0971), mRNA
6056	16041	25183	1.53	3.0E-75	11526319	NT	Homo sapiens HIR (histone cell cycle regulation defective, S. cerevisiae) homolog A (HIRA), mRNA
6056	16041	25184	1.53	3.0E-75	11526319	NT	Homo sapiens HIR (histone cell cycle regulation defective, S. cerevisiae) homolog A (HIRA), mRNA
6234	16700	26249	3.83	3.0E-75	7862209	NT	Homo sapiens KIAA0523 gene product (KIAA0523), mRNA
6234	16700	26249	3.83	3.0E-75	7862209	NT	Homo sapiens KIAA0523 gene product (KIAA0523), mRNA
6494	16593	26522	2.82	3.0E-75	4895632	NT	Homo sapiens Oncogene TIL (TIL) mRNA
6494	16593	26523	2.82	3.0E-75	4895632	NT	Homo sapiens Oncogene TIL (TIL) mRNA
7193	17070	27256	1.23	3.0E-75	11429904	NT	Homo sapiens small 1 (G-protein homolog), zinc finger protein (SNA1), mRNA
5460	15400		1.5	2.0E-75	AY34960.1	EST_HUMAN	AY34960.1cds Homo sapiens cDNA clone IMAGE:404202 5'
7082	16959	27182	1.79	2.0E-75	AB11783.1	EST_HUMAN	q961402.x1 NCL_GGAP_100 Homo sapiens cDNA clone IMAGE:191869 5' similar to TR-Q69398 Q69398 POLYOM. GENE;
2285	12136	22037	5.06	1.0E-75	AW169135.1	EST_HUMAN	xg90002.x1 NCL_GGAP_100 Homo sapiens cDNA clone IMAGE:293707 3' similar to contains PTR7.11
2916	12843	22844	3.17	1.0E-75	X62221.1	NT	PT87 repetitive element;
			3.17	1.0E-75	X62221.1	NT	H. sapiens ERCC22 gene, exons 1 & 2 (partial)
6903	16781	27490	4.13	1.0E-75	AA396270.1	EST_HUMAN	25703a.1 Soares, Jellis, JNH1 Homo sapiens cDNA clone IMAGE:726488 3' similar to gb.M13932.405
7423	17250	27490	3.73	1.0E-75	BF118445.1	EST_HUMAN	RIBOSOMAL PROTEIN S17 (HUMAN);
7423	17250	27490	3.73	1.0E-75	BF118445.1	EST_HUMAN	001000294.F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4126678 5'
8257	18137	27500	3.99	1.0E-75	AA08437.1	EST_HUMAN	001000294.F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4126678 5'
			3.99	1.0E-75	AA08437.1	EST_HUMAN	ec7768.at Strategene (8637210) Homo sapiens cDNA clone IMAGE:965993 3'
						EST_HUMAN	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-46, and partial cds, alternatively spliced
8441	18315	28573	2.6	1.0E-75	AF223391.1	NT	601437130.F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3922803 5'
9298	15100	24992	1.86	1.0E-75	BE994102.1	EST_HUMAN	wa30510.x1 NCL_GGAP_100 Homo sapiens cDNA clone IMAGE:2307103 3' similar to TR-O75235 O75235
38	10026	19825	1.46	9.0E-76	AB52648.1	EST_HUMAN	TRAP1;

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Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
38	10026	18926	1.45	9.0E-76	A026048.1	EST HUMAN	W430510.x1 NCI_CGAP_G038 Homo sapiens cDNA clone IMAGE:2807163 3' similar to TR-075235 O75235
2364	12244		1.16	9.0E-76	AA02415.1	EST HUMAN	TRAP1
7697	17547	27770	28.8	9.0E-76	M1287.1	NT	285007.51 Soares fetal liver spleen INFLS S1 Homo sapiens cDNA clone IMAGE:447841 3'
923	10848	20095	1.89	9.0E-76	4504374	NT	Human fertil Heavy subunit mRNA, complete cds
923	10848	20096	1.89	9.0E-76	4504374	NT	Homo sapiens H factor 1 (complement) (HFI) mRNA
2860	12807	22803	1.06	8.0E-76	7706724	NT	Homo sapiens H factor 1 (complement) (HFI) mRNA
5744	15652	25790	5.38	8.0E-76	11421442	NT	Homo sapiens LIM domain kinase 2 (SLK2), mRNA
6421	15282	25443	1.3	8.0E-76	11432115	NT	Homo sapiens serine/threonine kinase 2 (STK2), mRNA
8057	17048	28108	6.44	8.0E-76	10442821	NT	Homo sapiens baculoviral IAP repeat-containing 6 (BIRC6), mRNA
3036	19207		1.44	8.0E-76	11417692	NT	Homo sapiens calnexin binding protein 1 (KIA0330), mRNA
769	10890	20527	4.12	7.0E-76	5918022	NT	Homo sapiens dihydropyrimidin dehydrogenase (E3 component of pyruvate dehydrogenase complex, 2-oxo-glutarate complex, branched chain keto acid dehydrogenase complex) (DLD) mRNA
3254	13177	22575	2.84	7.0E-76	AF056480.1	NT	Homo sapiens cAMP-specific phosphodiesterase 8A (PDE8A) mRNA, partial cds
3280	13183	22582	7.08	7.0E-76	4503032	NT	Homo sapiens lymphocyte antigen 75 (LY75) mRNA, and transcribed products
3293	13215	23017	1.1	7.0E-76	47579165	NT	Homo sapiens core-binding factor, runt domain, alpha subunit 2; transcribed to, 1; cyclin D-related (CBFA2T1) mRNA
4275	14174	23351	4.3	7.0E-76	4507164	NT	Homo sapiens squalen synthase (7,8-dihydrocholesterol-NADPH: oxidoreductase) (SQR) mRNA
1214	11125	28652	4.3	7.0E-76	4507164	NT	Homo sapiens squalen synthase (7,8-dihydrocholesterol-NADPH: oxidoreductase) (SQR) mRNA
8781	17910	28154	19.65	6.0E-76	BE06263.1	EST HUMAN	60131201FT NIH JACC_44 Homo sapiens cDNA clone IMAGE:358757 5'
1899	11795	21673	3.69	6.0E-76	BE73201.1	EST HUMAN	60114223FT NIH JACC_44 Homo sapiens cDNA clone IMAGE:358757 5'
1899	11795	21674	3.69	6.0E-76	D63874.1	NT	Human mRNA for HMG-1, complete cds
1899	11795	21674	3.69	6.0E-76	D63874.1	NT	Human mRNA for HMG-1, complete cds
1899	11795	21675	3.69	6.0E-76	D63874.1	NT	Human mRNA for HMG-1, complete cds
7750	17000	27834	9.6	4.0E-76	D81625.1	EST HUMAN	HUM176001B Human fetal brain (TfU/liver) Homo sapiens cDNA clone GEN-176001 5'
7750	17000	27835	9.6	4.0E-76	D81625.1	EST HUMAN	HUM176001B Human fetal brain (TfU/liver) Homo sapiens cDNA clone GEN-176001 5'
613	10548	20358	1.78	9.0E-76	BF16262.1	EST HUMAN	U1H-BWT-ans-5-04-OU1st NCI_CGAP_Sub7 Homo sapiens cDNA clone IMAGE:308962 3'
613	10548	20359	1.78	9.0E-76	BF16262.1	EST HUMAN	U1H-BWT-ans-5-04-OU1st NCI_CGAP_Sub7 Homo sapiens cDNA clone IMAGE:308962 3'
1581	11465	21245	2.78	9.0E-76	4503478	NT	Homo sapiens eukaryotic translation elongation factor 1 beta 2 (EEF1B2) mRNA
1581	11465	21246	2.78	9.0E-76	4503478	NT	Homo sapiens eukaryotic translation elongation factor 1 beta 2 (EEF1B2) mRNA
3382	13300	23009	4.18	3.0E-76	BF576960.1	EST HUMAN	RC6S103002-180100-033-A03 S10300 Homo sapiens cDNA
3382	13300	23100	4.18	3.0E-76	BF576960.1	EST HUMAN	RC6S103002-180100-033-A03 S10300 Homo sapiens cDNA
5204	15084	28104	8.13	3.0E-76	Z14314.1	EST HUMAN	HSCZ0042 normalized infant brain cDNA Homo sapiens cDNA clone c-zap04 3'

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Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5842	15748	25681	7.85	3.0E-76	AF296598.1	NT Homo sapiens angiotensin binding protein 1 mRNA, complete cds
6737	16613	28066	1.92	3.0E-76	U42671.1	EST_HUMAN Y22010.11 Sources melanocyte 2B6H11 Homo sapiens cDNA clone IMAGE:271842.5'
7602	17453	27057	3.32	3.0E-76	AAW29693.1	EST_HUMAN X24901.11 NCI CGAP_K611 Homo sapiens cDNA clone IMAGE:273009.3'
7615	17469	27064	1.32	3.0E-76	AA42309.1	EST_HUMAN Z64811.11 Sources Testis_NHT Homo sapiens cDNA clone IMAGE:767461.5'
7615	17469	27065	1.32	3.0E-76	AA42309.1	EST_HUMAN Z64811.11 Sources Testis_NHT Homo sapiens cDNA clone IMAGE:767461.5'
8014	19537	25002	2.13	3.0E-76	AW97894.1	EST_HUMAN EST380058 IMAGE resequenced, MAGO Homo sapiens cDNA
9120	19745	24895	3.75	3.0E-76	AW95455.1	EST_HUMAN EST388525 IMAGE resequenced, MAGO Homo sapiens cDNA
280	10245	20965	1.22	2.0E-76	D84263.1	NT Human mRNA for possible protein TFRDII, complete cds
339	10298	20112	3.85	2.0E-76	D84263.1	NT Human mRNA for possible protein TFRDII, complete cds
339	10298	20113	3.86	2.0E-76	D84263.1	NT Human mRNA for possible protein TFRDII, complete cds
433	10397	20113	2.17	2.0E-76	4957602	NT Homo sapiens immunoglobulin (CD74A) binding protein 1 (IGBP1) mRNA
575	10513	20320	1.07	2.0E-76	4953944	NT Homo sapiens glucagon (GCG) mRNA
1014	10632	20778	1.03	2.0E-76	4759033	NT Homo sapiens cAMP responsive element binding protein 1 (CREB1) mRNA
1518	11423	21281	1.53	2.0E-76	450428	NT Homo sapiens GM2 ganglioside activator protein (GM2A) mRNA
1518	11423	21282	1.53	2.0E-76	450428	NT Homo sapiens GM2 ganglioside activator protein (GM2A) mRNA
1896	11762	21556	1.45	2.0E-76	AA25094.1	EST_HUMAN Z66911.11 SV40 genome editor beta SV1 Homo sapiens cDNA clone IMAGE:701625.3'
2811	12749	22556	2.83	2.0E-76	F22236	SWISSPROT OLEFACTORY RECEPTOR-LIKE PROTEIN F5
3257	13180	22979	2.01	2.0E-76	AA445992.1	EST_HUMAN Z64602.1 Sources Testis_NHT Homo sapiens cDNA clone IMAGE:760866.3' similar to SW:ITB5_HUMAN
3257	13180	22980	2.01	2.0E-76	AA445992.1	EST_HUMAN P18084 INTEGRIN BETA-3 SUBUNIT PRECURSOR ;
4043	10245	20065	0.94	2.0E-76	D84235.1	NT Z64602.1 Sources Testis_NHT Homo sapiens cDNA clone IMAGE:760866.3' similar to SW:ITB5_HUMAN
4687	11747	21627	6.33	2.0E-76	AW870618.1	EST_HUMAN P18084 INTEGRIN BETA-3 SUBUNIT PRECURSOR ;
5068	14038	24710	1.25	2.0E-76	5031600	NT Human mRNA for possible protein TFRDII, complete cds
5433	13374	25432	4.74	2.0E-76	AB020004.1	NT Homo sapiens EGF-like repeats and discoidin I-like domains 3 (EDIL3), mRNA
6518	16371	26554	1.70	2.0E-76	11427410	NT Homo sapiens TPCP888 protein (HSTPCR888), mRNA
7898	17748	27988	3.28	2.0E-76	11437211	NT Homo sapiens similar to ribosomal protein S26 (H. sapiens) (LOC53150), mRNA
8293	18172	28416	2.76	2.0E-76	7549007	NT Homo sapiens HIRA interacting protein 4 (dms-like) (HIRP4), mRNA
4200	14100	23881	2.18	1.0E-76	D363974.1	NT Human mRNA for HMG-1, complete cds
4200	14100	23882	2.18	1.0E-76	D363974.1	NT Human mRNA for HMG-1, complete cds
5345	15269	29593	5.29	1.0E-76	BE760537.1	EST_HUMAN 601580956F1 NH_MGC_71 Homo sapiens cDNA clone IMAGE:3944302.5'
6137	15064	28116	3.98	9.0E-77	BE68025.1	EST_HUMAN 601512439F1 NH_MGC_71 Homo sapiens cDNA clone IMAGE:3917373.5'
4421	14315	24101	1.05	8.0E-77	BF205181.1	EST_HUMAN 60186565F1 NH_MGC_17 Homo sapiens cDNA clone IMAGE:4109505.5'



Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon ID NO:	CRF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6347	16268	26095	2.40	8.0E-77	4600290	NT	Homo sapiens proteasome (prosome, macropain) 26S subunit, non-ATPase, 7 (Mcr24 homolog) (PSMD27) mRNA
6397	18578	29461	2.12	8.0E-77	AA019770.1	EST_HUMAN	ze69a2.1 Soares retina N26-4R Homo sapiens cDNA clone IMAGE:385678 5'
6397	18578	28992	2.12	8.0E-77	AA019770.1	EST_HUMAN	ze69a2.1 Soares retina N26-4R Homo sapiens cDNA clone IMAGE:385678 5'
6771	18286	26232	7.26	8.0E-77	R00246.1	EST_HUMAN	ye69D4.1 Soares fetal liver spleen INF15 Homo sapiens cDNA clone IMAGE:23007 3' similar to contains MER10 repetitive element ;
1687	11783	21959	3.28	7.0E-77	AG25755.1	EST_HUMAN	zu91g01.st Soares testis NHT Homo sapiens cDNA clone IMAGE:74592 3'
2350	12240	22136	2.1	7.0E-77	4505944	NT	Homo sapiens polymerase (RNA) II (DNA directed) polypeptide E (25kD) (POLR2E) mRNA
2350	12240	22137	2.1	7.0E-77	4505944	NT	Homo sapiens polymerase (RNA) II (DNA directed) polypeptide E (25kD) (POLR2E) mRNA
262	10227	20043	4.20	6.0E-77	4504600	NT	Homo sapiens interferon (alpha, beta and omega) receptor 2 (IFNAR2) mRNA
1125	11040	20892	0.9	6.0E-77	AV057593.1	EST_HUMAN	ES13692823 MAC2 resequences, MAC2 Homo sapiens cDNA
1624	11429	21287	17.84	6.0E-77	A024095.1	EST_HUMAN	ga7h12.x1 Soares fetal Lung NBHL19W Homo sapiens cDNA clone IMAGE:1746053 3'
1216	11124	20273	1.78	5.0E-77	AF041015.1	NT	7 Homo sapiens glucocorticoid (GCR) gene, exon 2
1337	11943	21101	1.19	5.0E-77	4657250	NT	Homo sapiens diaphorin and metalloproteinase domain 10 (ADAM10) mRNA
2736	12658	22462	0.97	5.0E-77	4503160	NT	Homo sapiens cullin 1 (CUL1) mRNA
4905	14053	24280	2.02	5.0E-77	5031600	NT	Homo sapiens EGF-like repeats and discoidin like domains 3 (EDL3) mRNA
4898	14053	24281	2.03	5.0E-77	5031600	NT	Homo sapiens EGF-like repeats and discoidin like domains 3 (EDL3) mRNA
4853	14733	24514	2.05	5.0E-77	AL043953.1	EST_HUMAN	DKFZ494G179.1 434 (synonym huc3) Homo sapiens cDNA clone DKFZ494G179 5'
8873	16722	23647	1.38	5.0E-77	11428849	NT	Homo sapiens 3-hydroxyacyl-CoA-oxoacyl-CoA hydrolase (HCOH) mRNA
8873	16722	23648	1.39	5.0E-77	11428849	NT	Homo sapiens 3-hydroxyacyl-CoA-oxoacyl-CoA hydrolase (HCOH) mRNA
7519	17338	27543	2.55	5.0E-77	11421928	NT	Homo sapiens sorting nexin 5 (SNX5) mRNA
7519	17338	27544	2.55	5.0E-77	11421928	NT	Homo sapiens sorting nexin 5 (SNX5) mRNA
7600	17840	26290	1.96	5.0E-77	AB002397.1	NT	Human mRNA for KIAA0259 gene, partial cds
7990	17840	26291	1.90	5.0E-77	AB002397.1	NT	Human mRNA for KIAA0259 gene, partial cds
1829	11824	21705	1.12	3.0E-77	6730038	NT	Homo sapiens SET domain and mariner transposase fusion genes (SETMAR) mRNA
1620	11824	21706	1.12	3.0E-77	6730038	NT	Homo sapiens SET domain and mariner transposase fusion genes (SETMAR) mRNA
8746	18129	28377	3.31	3.0E-77	BF359917.1	EST_HUMAN	FM3-MT0076-08080-005-g03 MT0076 Homo sapiens cDNA
1330	11237	21093	1.71	2.0E-77	AV784617.1	EST_HUMAN	AV784617 MDS Homo sapiens cDNA clone WDSBTF10 5'
1414	11320	21165	1.73	2.0E-77	AW997112.1	EST_HUMAN	RC3-BN0053-10200-011-H01 BN0053 Homo sapiens cDNA
2044	11935	21830	2.44	2.0E-77	141825.1	NT	Homo sapiens CYP17 gene, 5' end
2036	11945	21842	2.94	2.0E-77	7700315	NT	Homo sapiens CGH-79 protein (LOC51934) mRNA
2549	12724	22312	2.02	2.0E-77	AB037836.1	NT	Homo sapiens mRNA for KIAA1416 protein, partial cds
2549	12724	22313	2.02	2.0E-77	AB037836.1	NT	Homo sapiens mRNA for KIAA1416 protein, partial cds

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3947	13855	23029	1.33	2.0E-77	BC044319.1	EST_HUMAN	h04805.x1 Soares_NFL_T_OBC_S1 Homo sapiens cDNA clone IMAGE:3940113 3' similar to SW-GAG3_HUMAN P10204 RETROVIRUS-RELATED GAG POLYPROTEIN ;
4315	14212	23095	0.89	2.0E-77	A613519.1	EST_HUMAN	hw2302.x1 NCL CGAP Bms2 Homo sapiens cDNA clone IMAGE:2280468 3' similar to TR-O65245
4315	14212	23096	0.86	2.0E-77	A613519.1	EST_HUMAN	hw2302.x1 NCL CGAP Bms2 Homo sapiens cDNA clone IMAGE:2280468 3' similar to TR-O65245
4492	14386		3.48	2.0E-77	4504068	NT	Homo sapiens glutamic-oxaloacetic transaminase 2, mitochondrial (aspartate aminotransferase 2) (GOT2), nuclear gene encoding mitochondrial protein, mRNA
4659	14548	24334	3.58	2.0E-77	AA653025.1	EST_HUMAN	ne5912.x1 NCL CGAP_P2 Homo sapiens cDNA clone IMAGE:1189338 similar to SW-RL23_HUMAN
5025	15540	25029	1.8	2.0E-77	BE268940.1	EST_HUMAN	P47H1.60S RIBOSOMAL PROTEIN L29, [1] contains element MRS1 repetitive element ;
5745	15553	25761	1.34	2.0E-77	BE787143.1	EST_HUMAN	601119552FT NIH_MGC_37 Homo sapiens cDNA clone IMAGE:3029436 5'
6257	16120	26276	12.74	2.0E-77	A833003.1	EST_HUMAN	af7409.x1 Bayesal cdon HPLB37 Homo sapiens cDNA clone IMAGE:2377720 3' similar to TR-Q133.1
7469	17359	27664	4.96	2.0E-77	U50321.1	NT	Human protein kinase C substrate SIK-H (PRKCSH) gene, exon 7
37	10024	19821	0.97	1.0E-77	A5033102.1	NT	Homo sapiens mRNA for KIAA1275 protein, partial cds
37	10024	19822	0.97	1.0E-77	A5033102.1	NT	Homo sapiens mRNA for KIAA1275 protein, partial cds
271	10237	20354	1.87	1.0E-77	4502108	NT	Homo sapiens amyloid beta (A4) precursor protein (protease resistant), Alzheimer disease (APP), mRNA
271	10237	20355	1.87	1.0E-77	4502108	NT	Homo sapiens amyloid beta (A4) precursor protein (protease resistant), Alzheimer disease (APP), mRNA
857	12079	20835	4.95	1.0E-77	4502108	NT	Homo sapiens amyloid beta (A4) precursor protein (protease resistant), Alzheimer disease (APP), mRNA
857	12079	20836	4.95	1.0E-77	4502108	NT	Homo sapiens amyloid beta (A4) precursor protein (protease resistant), Alzheimer disease (APP), mRNA
2394	12272	22168	1.22	1.0E-77	AB025024.1	NT	Homo sapiens mRNA for KIAA1107 protein, complete cds
3007	12335	23727	2.82	1.0E-77	4503300	NT	Homo sapiens 2,4-dienoyl CoA reductase 1, mitochondrial (DECR1), mRNA
4256	14165	23930	2.99	1.0E-77	7706269	NT	Homo sapiens CGF-40 protein (LOC51629), mRNA
4423	14317	24103	14.79	1.0E-77	AJ26041.1	NT	Homo sapiens 959 kb contig between AML1 and CBRT on chromosome 21q22; segment 1/3
4552	14445	24229	1.95	1.0E-77	0552322	NT	Homo sapiens breast cancer 1, early onset (BRCA1), transcript variant BRCAT1-exon4, mRNA
5179	15043	24810	2.80	1.0E-77	AW755254.1	EST_HUMAN	CMVA5 Human cardiac muscle expression library Homo sapiens cDNA clone 4151935 similar to CMVA5 Cardiomypopathy associated gene 5

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## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) HE BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5510	15525	25077	1.93	1.0E-77	AF060944.1	NT	Homo sapiens dynactin 1 (DCTN1) gene, exons 27 and 28
5510	15525	25093	1.93	1.0E-77	AF060944.1	NT	Homo sapiens dynactin 1 (DCTN1) gene, exons 27 and 28
5598	15597	25098	1.96	1.0E-77	M25844.1	NT	Human von Willebrand factor gene, exon 20
6197	15997	25099	11.30	1.0E-77	5681412	NT	Homo sapiens elastin (supraventricular aortic elastosis, Williams-Buren syndrome) (ELN), mRNA
6002	17952	25095	1.22	1.0E-77	AB022936.1	NT	Homo sapiens huc-GAAT-FP mRNA for glucuronyltransferase, complete cds
8002	17952	25094	1.22	1.0E-77	AB022936.1	NT	Homo sapiens huc-GAAT-FP mRNA for glucuronyltransferase, complete cds
8013	17953	25103	2.53	9.0E-78	AW75302.1	EST_HUMAN	RC3-CT0254-280559-011-405 CT0254 Homo sapiens cDNA
5580	15793	25097	2.97	8.0E-78	AW84705.1	EST_HUMAN	RC2-ET0023-060500-012-405 ET0023 Homo sapiens cDNA
5580	15793	25098	2.97	8.0E-78	AW84705.1	EST_HUMAN	RC2-ET0023-060500-012-405 ET0023 Homo sapiens cDNA
80	10094	19881	1.83	6.0E-78	AU118789.1	EST_HUMAN	AUT18789 HENBA1 Homo sapiens cDNA clone HENBA1004354.5
80	10094	19882	1.83	6.0E-78	AU118789.1	EST_HUMAN	AUT18789 HENBA1 Homo sapiens cDNA clone HENBA1004354.5
5550	15855	19883	2.51	5.0E-78	11432710	NT	Homo sapiens GDNF family receptor alpha 1 (GFRA1), mRNA
211	10122	19895	1.11	5.0E-78	11422488	NT	Homo sapiens hypothetical protein FLJ1318 (FLJ1318), mRNA
2515	12980	22281	4.1	5.0E-78	AV673424.1	EST_HUMAN	CE2121.1, x3 NH_MGC_10 Homo sapiens cDNA clone IMAGE-260405 5' similar to YP_Y4855A.6
3398	13259	22063	3.81	5.0E-78	U55595.1	NT	Human collagenase type IV (CLG4) gene, exon 5
6023	15243	25048	2.46	5.0E-78	AF038598.1	NT	Homo sapiens Eosinophilic myeloid protein (Eosinophilic myeloid protein), partial cds
6422	15343	25096	9.35	5.0E-78	11165958	NT	Homo sapiens transforming growth factor, beta-induced, 58KD (TGFB1), mRNA
6244	16710	25092	2.17	5.0E-78	AW653120.1	EST_HUMAN	EST198160 IMAGE resequencing, MACS Homo sapiens cDNA
7248	17126	27315	6.5	5.0E-78	U00899.1	NT	Human lysosomal alpha-mannosidase (man2) gene, exon 7
7249	17126	27319	3.75	5.0E-78	BE00898.1	EST_HUMAN	601649061F1 NIH_MGC_32 Homo sapiens cDNA clone IMAGE:3931887 5'
1502	11406	21265	1.6	4.0E-78	AL355841.1	NT	Novel human gene mapping to chromosome 22
1929	11833	21393	1.53	4.0E-78	AB65094.1	EST_HUMAN	w87512.x1 NIH_MGC_32 Homo sapiens cDNA clone IMAGE:2495915 3' similar to SW:WAP_PIG
2270	12154	22053	2.21	4.0E-78	AF107405.1	NT	O46555 WHEY ACIDIC PROTEIN PRECURSOR
4327	14125	23959	1.39	4.0E-78	7665676	NT	Homo sapiens pre-mRNA splicing factor (SFRS3) mRNA, complete cds
4594	14550	24340	1.27	4.0E-78	4905505	NT	Homo sapiens synectin (LOC20816), mRNA
4594	14550	24341	1.27	4.0E-78	4905505	NT	Homo sapiens phosphatidylinositol 4-kinase, catalytic, alpha polypeptide (PIK4CA), mRNA
7597	17817	25056	1.94	4.0E-78	11560151	NT	Homo sapiens phosphatidylinositol 4-kinase, catalytic, alpha polypeptide (PIK4CA), mRNA
7597	17817	25056	1.94	4.0E-78	11560151	NT	Homo sapiens phosphatidylinositol 4-kinase, catalytic, alpha polypeptide (PIK4CA), mRNA
8721	18539	26822	1.97	4.0E-78	AF160148.1	NT	Homo sapiens hypothetical C2H12 zinc finger protein FLJ22504 (FLJ22504), mRNA
8944	18656	26844	3	4.0E-78	X05844.1	NT	Homo sapiens CAP1 (CAP1) mRNA, complete cds
9964	19224	25209	2.85	4.0E-78	AB011399.1	NT	Human transforming growth factor-beta precursor gene exons 4-5 (and joined mature peptide)
155	10129	19944	1.6	3.0E-78	AF06601.1	NT	Homo sapiens gene for A1-5, complete cds
						NT	Homo sapiens eRF1 gene, complete cds

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## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source
155	10129	16945	1.6	3.0E-78	AF059021.1	Homo sapiens <i>SRF1</i> gene, complete cds
3176	13103	22808	0.91	3.0E-78	4607164	Homo sapiens nuclear enolase 1 (SP100) mRNA
4015	13667	23438	0.93	3.0E-78	4607334	Homo sapiens synaptotagmin 1 (SYN1) mRNA
7022	17752		5.59	3.0E-78	BE144768.1	Homo sapiens <i>CDNA</i>
5546	18228	28478	5.52	3.0E-78	BE153118.1	Homo sapiens <i>CDNA</i>
3383	13010		2.22	2.0E-78	U04489.1	Homo sapiens type IV collagen alpha 5 chain (COL4A5) gene, exon 20
3382	13841		1.68	2.0E-78	U04489.1	EST1192683 Jcrkat T-cells VI Homo sapiens <i>CDNA</i> 5' end
6412	16274	28435	1.46	2.0E-78	AF142306.1	UHF-BK0-wj-p-10-0111 NIH MGC 36 Homo sapiens <i>CDNA</i> clone IMAGE:3064139 5'
6412	16274	28438	1.46	2.0E-78	AF142306.1	UHF-BK0-wj-p-10-0111 NIH MGC 36 Homo sapiens <i>CDNA</i> clone IMAGE:3064139 5'
6547	16405	28684	3.88	2.0E-78	BF55900.1	EST11863961 NIH MGC 49 Homo sapiens <i>CDNA</i> clone IMAGE:328569 5'
6887	16657	28761	2.73	2.0E-78	AF174177.1	EST11863961 NIH MGC 49 Homo sapiens <i>CDNA</i> clone IMAGE:328569 5'
6621	16799	28691	1.94	2.0E-78	AF57509.1	EST11863961 NIH MGC 49 Homo sapiens <i>CDNA</i> clone IMAGE:328569 5'
6621	16799	28692	1.84	2.0E-78	AF57509.1	EST11863961 NIH MGC 49 Homo sapiens <i>CDNA</i> 3'
8429	18303	28595	4.5	2.0E-78	AF197837.1	EST11863961 NIH MGC 49 Homo sapiens <i>CDNA</i> clone IMAGE:328569 5'
8467	18340	28605	3.25	2.0E-78	N95651.1	EST11863961 NIH MGC 49 Homo sapiens <i>CDNA</i> clone IMAGE:328569 5'
5247	15170	24943	2.9	1.0E-78	11417304	NT
6743	18622		1.68	1.0E-78	U52373.1	NT
9185	18524	25390	5.14	1.0E-78	11430490	NT
9284	18088	26327	1.29	1.0E-78	11430503	NT
4900	14488	24274	4.48	9.0E-79	11525891	NT
4758	14643	24431	2.49	9.0E-79	BE000937.1	EST11863961 NIH MGC 49 Homo sapiens <i>CDNA</i>
5335	15255	25078	12.03	9.0E-79	AE029070.1	NT
5827	15753	25944	2.18	9.0E-79	5454146	NT
7243	17120	27315	4.69	9.0E-79	J02863.1	NT
7243	17120	27316	4.69	9.0E-79	J02863.1	NT
7653	17603	28612	1.31	9.0E-79	AF052943.1	NT
7653	17603	28613	1.31	9.0E-79	AF052943.1	NT
8419	18263	28637	1.82	9.0E-79	A1006273.1	NT
8902	18616	28606	2.82	9.0E-79	11423827	NT
8902	18616	28607	2.82	9.0E-79	11423827	NT
9584	19347	25213	1.49	9.0E-79	11417977	NT

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Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3682	13596	23342	1.2	8.0E-79	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
4391	14287	24099	0.94	8.0E-79	D28476.1	NT	Human mRNA for KIA0045 gene, complete cds
4391	14287	24070	0.94	8.0E-79	D28476.1	NT	Human mRNA for KIA0045 gene, complete cds
9107	15067	24699	1.4	8.0E-79	8567387	NT	Human sapiens period (Drosophila) homolog 3 (PER3), mRNA
3214	13138	22541	6.85	7.0E-79	BE619848.1	EST HUMAN	g014776917 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3876657 3'
9040	18927		1.29	6.0E-79	AA595829.1	EST HUMAN	g014776917 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:462568 3' similar to
8785	18901	28591	4.15	5.0E-79	AL163282.2	NT	Homo sapiens chromosome 21 segment HS21C082
3135	13054		1.12	4.0E-79	8022325	NT	Homo sapiens hypothetical protein FLJ10283 (FLJ10283), mRNA
4848	14823	24590	1.33	4.0E-79	BF210890.1	EST HUMAN	g018745227 NIH_MGC_54 Homo sapiens cDNA clone IMAGE:4101245 5'
310	10272	20991	1.4	3.0E-79	AF114488.1	NT	Homo sapiens Intersectin short isoform (ITSN), mRNA, complete cds
962	10885	20733	2.89	3.0E-79	U06410.1	NT	Homo sapiens cell line tkA201a chondrocyte on current inducer protein (Cih) gene, complete cds
3060	13897	22778	1.89	3.0E-79	AF110324.1	NT	Human zinc finger protein ZNF183 mRNA, partial cds
5291	15212	25012	4.62	3.0E-79	AF110324.1	NT	Homo sapiens MSTR016 (NS1718) mRNA, complete cds
5009	15424	25486	1.71	3.0E-79	AB203890.1	NT	Homo sapiens mRNA for KIA0692 protein, partial cds
5235	15442	25507	3.47	3.0E-79	11426770	NT	Homo sapiens neilin 1 (NTN1), mRNA
5235	15442	25508	3.47	3.0E-79	11426770	NT	Homo sapiens neilin 1 (NTN1), mRNA
5200	15580	25091	3.28	3.0E-79	AB014320.1	NT	Homo sapiens mRNA for KIA0620 protein, partial cds
6200	15580	25062	3.28	3.0E-79	AB014320.1	NT	Homo sapiens mRNA for KIA0620 protein, partial cds
618	10355	20367	1.05	2.0E-79	BC378626.1	EST HUMAN	g015841052 NIH_MGC_53 Homo sapiens cDNA clone IMAGE:351107 5'
912	10336	20685	1.14	2.0E-79	4757641	NT	g181007.X1 NCI_CGAP_7528 Homo sapiens cDNA clone IMAGE:2118055 3'
1019	10337		1.43	2.0E-79	AI623747.1	EST HUMAN	Homo sapiens BCL2L2 like 2 (BCL2L2) mRNA
2101	11690	21888	14.14	2.0E-79	4988803	NT	Homo sapiens phosphodiesterase 6A, cGMP-specific, rod, alpha (PDE6A), mRNA
2101	11690	21889	14.14	2.0E-79	4988803	NT	Homo sapiens phosphodiesterase 6A, cGMP-specific, rod, alpha (PDE6A), mRNA
2148	12034	21931	0.99	2.0E-79	AJ271408.1	NT	Homo sapiens mRNA for Fes-associated factor, FAF1 (Faf1 gene)
2265	12149	22049	1.54	2.0E-79	AF244138.1	NT	Homo sapiens hepatocellular carcinoma-associated antigen 88 (HCA88) mRNA, complete cds
3838	13749	23542	0.86	2.0E-79	AF174082.1	NT	Homo sapiens chloride channel CLC4 (CLC4) mRNA, complete cds
4074	13976	23755	1.17	2.0E-79	AJ271408.1	NT	Homo sapiens mRNA for Fes-associated factor, FAF1 (Faf1 gene)
4900	14478	24265	0.96	2.0E-79	AL163206.2	NT	Homo sapiens chromosome 21 segment HS21C006
6251	15117	26270	1.83	2.0E-79	7382479	NT	Homo sapiens Rho GTPase activating protein 6 (ARHGAP6), transcript variant 4, mRNA
6251	15117	26271	1.83	2.0E-79	7382479	NT	Homo sapiens Rho GTPase activating protein 6 (ARHGAP6), transcript variant 4, mRNA
6905	16334	27039	2.8	2.0E-79	7382479	NT	Homo sapiens Rho GTPase activating protein 6 (ARHGAP6), transcript variant 4, mRNA
7809	17058	27865	1.44	2.0E-79	S72899.1	NT	H4D105170 putative cytoskeletal protein [human, thyroid, mRNA, 3011 nt]
7809	17058	27867	1.44	2.0E-79	S72899.1	NT	H4D105170 putative cytoskeletal protein [human, thyroid, mRNA, 3011 nt]

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8391	18267	26516	4.22	2.0E-78	BC064386.1	EST_HUMAN	RC4-B10310-110300-015-H10 B10310 Homo sapiens cDNA
8391	18267	26517	4.22	2.0E-78	BC054366.1	EST_HUMAN	RC4-B10310-110300-015-H10 B10310 Homo sapiens cDNA
6078	14066	24885	2.6	2.0E-78	7662357	NT	Homo sapiens KIAA00879 protein (KIAA0879), mRNA
6078	14066	24885	4.28	2.0E-78	AB020640.1	NT	Homo sapiens cDNA for KIAA0883 protein, partial cds
9361	18007	26341	1.86	2.0E-78	11418322	EST_HUMAN	Homo sapiens cDNA for KIAA0883 protein, partial cds
9361	18007	26307	2.78	1.0E-78	BF063071.1	EST_HUMAN	NR0-NN0087-260600-017-510 NN0087 Homo sapiens cDNA
888-4	18704	26568	2.74	1.0E-78	BF063071.1	EST_HUMAN	NR0-NN0087-260600-017-510 NN0087 Homo sapiens cDNA
3107	13033	22628	3.79	9.0E-90	AA725948.1	EST_HUMAN	ad23-05.81 Soares, testis, NHT Homo sapiens cDNA clone 1343648 3'
3107	13033	22628	3.79	9.0E-90	AA725948.1	EST_HUMAN	ad23-05.81 Soares, testis, NHT Homo sapiens cDNA clone 1343648 3'
7751	17601	27824	1.28	9.0E-90	BE198903.1	EST_HUMAN	601181652-F1 NH, MGSC, 7 Homo sapiens cDNA clone IMAGE3936057 5'
8597	18464	28735	11.05	9.0E-90	11433024	NT	Homo sapiens solute carrier family 7 (cationic amino acid transporter, y <sup>+</sup> system), member 8 (SLC7A8), mRNA
8597	18464	28736	11.05	9.0E-90	11433024	NT	Homo sapiens solute carrier family 7 (cationic amino acid transporter, y <sup>+</sup> system), member 8 (SLC7A8), mRNA
3551	13496		0.95	8.0E-90	J94387.1	NT	Homo sapiens Y chromosome spermatogenesis candidate protein (RBM) pseudogene mRNA, partial cds
6465	16543	28512	2.83	8.0E-90	11429417	NT	Homo sapiens KIAA0724 gene product (KIAA0724), mRNA
6465	16543	28513	2.83	8.0E-90	11429417	NT	Homo sapiens KIAA0724 gene product (KIAA0724), mRNA
7408	17276	27483	1.19	8.0E-90	6005621	NT	Homo sapiens triple functional domain (P1PRF interacting) (TRIC), mRNA
7408	17276	27483	1.19	8.0E-90	6005621	NT	Homo sapiens triple functional domain (P1PRF interacting) (TRIC), mRNA
862	14068	20657	2.94	6.0E-90	AI422167.1	EST_HUMAN	1056402.X1 NCI, COAP, Bm23 Homo sapiens cDNA clone IMAGE2103469 3' similar to SW-NUEM_HUMAN C17H95 NADH-HYDROLYSING OXIDOREDUCTASE 39 KD SUBUNIT PRECURSOR ;
1624	11528	21390	2.05	6.0E-90	U64698.1	NT	Homo sapiens NAD, convertase mRNA, complete cds
4168	14068	23865	1.09	6.0E-90	AB032981.1	NT	Homo sapiens NAD, convertase mRNA, complete cds
4168	14068	23866	1.09	6.0E-90	AB032981.1	NT	Homo sapiens NAD, convertase mRNA, complete cds
6543	15461	25632	4.01	6.0E-90	11421482	NT	Homo sapiens mRNA for KIAA1105 protein, partial cds
6702	15610	25712	2.50	6.0E-90	AJ404468.1	NT	Homo sapiens mediate dehydrogenase 2, NAD (mitochondrial) (MDH2), mRNA
5716	16683	25791	3.84	6.0E-90	11436736	NT	Homo sapiens tubulin like protein 3 (TULP3), mRNA
7123	17000	27101	3.07	6.0E-90	11529494	NT	Homo sapiens G protein-coupled receptor 51 (GPR51), mRNA
7123	17000	27102	3.07	6.0E-90	11529494	NT	Homo sapiens G protein-coupled receptor 51 (GPR51), mRNA
7214	17091	27281	1.74	6.0E-90	AI163301.2	NT	Homo sapiens chromosome 21 segment H37C101
7672	17522	27748	1.68	6.0E-90	U20211.1	NT	Human cDNA clone p106000 cAMP-phosphodiesterase alpha subunit gene, exon 21
8311	18188	28437	2.91	6.0E-90	11427350	NT	Homo sapiens brefeldin A-inhibited guanine nucleotide-exchange protein 1 (BIG1), mRNA

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Table 4  
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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8555	18426	28664	50.71	6.0E-80	AF226730.1	NT	Homo sapiens CytR mRNA, complete cds
9047	10808	20687	1.98	6.0E-80	A42197.1	EST_HUMAN	H6502.x1 NCI CGAP Bm23 Homo sapiens cDNA clone IMAGE:2703468 3' similar to SW-NUEM_HUMAN Q16795 NADH-LIBULINONE OXIDOREDUCTASE 39 KD SUBUNIT PRECURSOR
8172	18402		1.02	6.0E-80	AF240788.1	NT	Homo sapiens CIST gene for cerebrocortic sulfotransferase, exon 1, 2, 3, 4, 5
8371	19037		4.55	6.0E-80	AB025620.1	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds
8847	19068		2.25	6.0E-80	AJ133127.1	NT	Homo sapiens mRNA for sodium-glucose cotransporter (SGLT2 gene)
673	10511	20319	1.11	6.0E-80	4505228	NT	Homo sapiens proteasome (prosome, macropain) 28S subunit, non-ATPase, 3 (PSMD3) mRNA
817	10745	20562	1.26	6.0E-80	AF108830.1	NT	Homo sapiens serine-threonine protein kinase (MNBH) mRNA, complete cds
817	10745	20563	1.26	6.0E-80	AF108830.1	NT	Homo sapiens serine-threonine protein kinase (MNBH) mRNA, complete cds
1172	11084		4.71	6.0E-80	X01647.1	NT	H. sapiens ncx1 gene (exon 12)
1440	11346		2.28	6.0E-80	AL163263.2	NT	Homo sapiens chromosome 21; segment HS21C083
2811	12102	22091	0.92	6.0E-80	U83358.1	NT	Human 13 kDa protein homolog mRNA, complete cds
2830	12290	22162	3.98	6.0E-80	AB037655.1	NT	Homo sapiens mRNA for KIAA1434 protein, partial cds
2784	12626	22618	1.13	6.0E-80	4504292	NT	Homo sapiens H3 histone family, member J (H3F1J) mRNA
3953	13891	23638	1.07	6.0E-80	AB018083.1	NT	Homo sapiens HNF-1 mRNA for beta-1, 4 mannosyltransferase, complete cds
3953	13891	23637	1.07	6.0E-80	AB018083.1	NT	Homo sapiens HNF-1 mRNA for beta-1, 4 mannosyltransferase, complete cds
4872	14752	24531	1.74	6.0E-80	AL163268.2	NT	Homo sapiens chromosome 21; segment HS21C088
8838	16745	26838	1.48	6.0E-80	F23915.1	EST_HUMAN	Human reticulon protein complex 2, gene (R12-89), mRNA
7333	17237	27441	7.48	4.0E-80	F23915.1	EST_HUMAN	HSPD13155 HMG3 Homo sapiens cDNA clone H000445F03
210	10161		4.71	6.0E-80	AL163270.2	NT	Homo sapiens chromosome 21; segment HS21C070
4810	14488	24287	1.43	6.0E-80	BF085089.1	EST_HUMAN	PNU-3N0078-04000-002-E03 GN0078 Homo sapiens cDNA
4810	14701		4.97	3.0E-80	BE817465.1	EST_HUMAN	Q14-8N0258-04000-241-g70 EN0258 Homo sapiens cDNA
5654	16470	25541	2.05	6.0E-80	A001676.1	EST_HUMAN	code12.1 Sources: NSF_F9_GW_OT_PA_P_51 Homo sapiens cDNA clone IMAGE:1857054 3' similar to TRC057900 C057900 PIGL. ;
1787	17686	21527	6.39	2.0E-80	R43321.1	EST_HUMAN	YF6568.r1 Sources: Infant brain IN1B Homo sapiens cDNA clone IMAGE:38606 5'
1816	17713	21563	1.91	2.0E-80	AA44462.1	EST_HUMAN	RET1487 subcloned rat cDNA library Homo sapiens cDNA clone RET1487
2009	19191	27191	6.8	2.0E-80	AL0481163.2	EST_HUMAN	DKF2644D1323.1 1434 (synonym: hias3) Homo sapiens cDNA clone DKF2644D1323 5'
6132	18979	28115	1.98	2.0E-80	11421930	NT	Homo sapiens Cidg Transport complex protein (90 kDa) (GTGB9), mRNA
8243	18123	28373	3.08	2.0E-80	AA383462.1	EST_HUMAN	27001.21 Sources: testis, NHT Homo sapiens cDNA clone IMAGE:72727 5' similar to TR:G191315
732	10296		1.82	1.0E-80	AL163303.2	NT	G191315 ANDROGEN-DEPENDENT EXPRESSED PROTEIN. ;
782	10712	20551	1.12	1.0E-80	AF231620.1	NT	Homo sapiens chromosome 21; segment HS21C103

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Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1911	11808		3.13	1.0E-50	AF123658.1	EST_HUMAN	mtD112.NC1 CGAP_Coel Homo sapiens cDNA clone IMAGE:1076495 3' similar to contains OFRL11 ORF repetitive element;
4398	14254	24039	0.95	1.0E-50	AF071788.1	NT	Homo sapiens cullin 4A (CUL4A) mRNA, complete cds
5182	15055	24819	0.97	1.0E-50	AL161788.1	NT	Homo sapiens chromosome 21 segment HS212078
5285	15187		5.03	1.0E-50	BC369515.1	EST_HUMAN	901274305FT NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3615433 5'
5933	15547	25635	6.41	1.0E-50	U10347.1	NT	Human pro-alpha1 Type II collagen (COL2A1) gene exons 1-54, complete cds
5916	15922	25947		1.0E-50		NT	Homo sapiens malate dehydrogenase 2, NAD (mitochondrial) (MDH2), nuclear gene encoding mitochondrial protein, mRNA
6470	16320	26405	2.68	1.0E-50	AB48731.1	EST_HUMAN	wg25055.x1 NC1 CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2472268 3'
6470	16320	26407	2.68	1.0E-50	AB48731.1	EST_HUMAN	wg25055.x1 NC1 CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2472268 3'
7350	17218	27417	1.23	1.0E-50	AF248319.1	NT	Homo sapiens probable mannose binding C-type lectin DC-SIGNR mRNA, complete cds
7350	17218	27418	1.23	1.0E-50	AF248319.1	NT	Homo sapiens probable mannose binding C-type lectin DC-SIGNR mRNA, complete cds
7657	17807	28049	1.19	1.0E-50	D63479.2	NT	Homo sapiens mRNA for KIAA0145 protein, partial cds
8044	17935	28183	7.43	1.0E-50	1164126	NT	Homo sapiens similar to rat myogenin (LOC64182), mRNA
8044	17935	28184	7.43	1.0E-50	1164126	NT	Homo sapiens similar to rat myogenin (LOC64182), mRNA
9433	19379	29281	1.46	1.0E-50	11417801	NT	Homo sapiens mRNA for KIAA0833 protein, partial cds
9843	19211	29298	1.83	1.0E-50	AB203540.1	NT	Homo sapiens gene for A1-F5, complete cds
9701	19228		1.99	1.0E-50	AB011589.1	NT	Homo sapiens gene for A1-F5, complete cds
8071	17952	28212	2.33	8.0E-51	AB217521	EST_HUMAN	900955.x1 Soares_NFL_1_GSC_S1 Homo sapiens cDNA clone IMAGE:1654258 3'
8071	17952	28213	2.33	8.0E-51	AB217521	EST_HUMAN	900955.x1 Soares_NFL_1_GSC_S1 Homo sapiens cDNA clone IMAGE:1654258 3'
8494	19397	29631	4.06	8.0E-51	BE394426.1	EST_HUMAN	90131053FT NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3933070 5'
6900	19164	26321	3.06	7.0E-51	AB22115.1	EST_HUMAN	2651cd.03 Soares_fetal_lung_NbHL109 Homo sapiens cDNA clone IMAGE:296916 3'
4200	14188	23971	4.84	6.0E-51	BE258829.1	EST_HUMAN	90111670FT NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3392840 5'
4200	14188	23972	4.84	6.0E-51	BE258829.1	EST_HUMAN	90111670FT NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3392840 5'
5229	15163	24920	1.93	6.0E-51	4901648	NT	Homo sapiens ATP-binding cassette, sub-family A (ABC1), member 3 (ABCA3), mRNA
5229	15163	24921	1.93	6.0E-51	4901648	NT	Homo sapiens ATP-binding cassette, sub-family A (ABC1), member 3 (ABCA3), mRNA
7325	17201	27401	1.34	6.0E-51	AA360017.1	EST_HUMAN	EST169129 Fetal lung 11 Homo sapiens cDNA 5' end
9679	19196	28209	1.82	6.0E-51	BF79022.1	EST_HUMAN	90215569FT NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4294601 5'
9579	19196	25270	1.82	6.0E-51	BF79022.1	EST_HUMAN	90215569FT NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4294601 5'
2170	12057	21950	3.14	6.0E-51	BE289042.1	EST_HUMAN	90112500FT NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3345480 5'
6901	19780	29374	3.47	5.0E-51	AB007923.1	NT	Homo sapiens mRNA for KIAA0454 protein, partial cds
6901	19780	29375	3.47	5.0E-51	AB007923.1	NT	Homo sapiens mRNA for KIAA0454 protein, partial cds
5895	19377	28696	2.51	5.0E-51	5900634	NT	Homo sapiens hypothetical protein (FLJ11045), mRNA
214	10185	19998	0.87	4.0E-51	AF252257.1	NT	Homo sapiens ORF2 binding protein mRNA, partial cds



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Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3002	13516	25304	2	1.0E-81	AW 960698.1	EST HUMAN	EST1372729 IMAGE resequences, IMAGE Homo sapiens cDNA
4414	14308	24091	3.07	1.0E-81	AA040370.1	EST HUMAN	244909.01 Soares, pregnant, uterus, INHPU Homo sapiens cDNA, clone IMAGE 486825 5' similar to
4503	14439	24222	7.85	1.0E-81	BE047096.1	EST HUMAN	PIR-S82437 S52437 CDP-diacylglycerol synthase - fruit fly
5203	15083	29103	9.03	1.0E-81	U07628.1	NT	524504.yf NCI CGAP Bms2 Homo sapiens cDNA clone IMAGE 2291820 5'
5284	15206	24982	4.01	1.0E-81	11432666	NT	Human acylate hydratase (ACOH) gene, exon 3
5284	15206	24983	4.01	1.0E-81	11432666	NT	Human acylate hydratase (ACOH) gene, exon 3
5408	15388	25449	3.54	1.0E-81	U52351.1	EST HUMAN	Homo sapiens polymerase (DNA directed), gamma (POLG) mRNA
5408	15388	25450	3.54	1.0E-81	U52351.1	EST HUMAN	Homo sapiens polymerase (DNA directed), gamma (POLG) mRNA
5737	15445	25750	3.15	1.0E-81	BF57664.1	EST HUMAN	Homo sapiens arm-repeat protein NPRA3/neurogranin (CTNN2) mRNA, partial cds
5737	15445	25750	3.15	1.0E-81	BF57664.1	EST HUMAN	Homo sapiens arm-repeat protein NPRA3/neurogranin (CTNN2) mRNA, partial cds
6567	16425	26006	9.4	1.0E-81	11432666	NT	Homo sapiens polymerase (DNA directed), gamma (POLG) mRNA
7631	17482	27702	2.62	1.0E-81	BE95278.1	EST HUMAN	601640501FT NIH_MGC_56 Homo sapiens cDNA clone IMAGE 3800228 5'
7631	17482	27703	2.62	1.0E-81	BE95278.1	EST HUMAN	601640501FT NIH_MGC_56 Homo sapiens cDNA clone IMAGE 3800228 5'
7726	17558	27699	4.81	1.0E-81	BE954387.1	EST HUMAN	601640501FT NIH_MGC_56 Homo sapiens cDNA clone IMAGE 3800228 5'
7819	17699	27699	2.83	1.0E-81	BE744545.1	EST HUMAN	601677339FT NIH_MGC_9 Homo sapiens cDNA clone IMAGE 3833260 5'
7819	17699	27699	2.83	1.0E-81	BE744545.1	EST HUMAN	601677339FT NIH_MGC_9 Homo sapiens cDNA clone IMAGE 3833260 5'
8003	17830	26091	1.46	1.0E-81	AW 960750.1	EST HUMAN	601677339FT NIH_MGC_9 Homo sapiens cDNA clone IMAGE 3833260 5'
8438	18312	26568	1.08	1.0E-81	AW 960750.1	EST HUMAN	601677339FT NIH_MGC_9 Homo sapiens cDNA clone IMAGE 3833260 5'
8438	18312	26568	1.08	1.0E-81	AW 960750.1	EST HUMAN	601677339FT NIH_MGC_9 Homo sapiens cDNA clone IMAGE 3833260 5'
8594	18316	22330	2.42	1.0E-81	AW 960698.1	EST HUMAN	601677339FT NIH_MGC_9 Homo sapiens cDNA clone IMAGE 3833260 5'
8594	18316	22330	2.42	1.0E-81	AW 960698.1	EST HUMAN	601677339FT NIH_MGC_9 Homo sapiens cDNA clone IMAGE 3833260 5'
8910	19224	26915	1.68	1.0E-81	BF204253.1	EST HUMAN	601677339FT NIH_MGC_9 Homo sapiens cDNA clone IMAGE 3833260 5'
9278	19681	25325	3.02	1.0E-81	11418138	NT	601677339FT NIH_MGC_9 Homo sapiens cDNA clone IMAGE 3833260 5'
12	9998	19789	1.87	8.0E-82	AF167406.1	NT	601677339FT NIH_MGC_9 Homo sapiens cDNA clone IMAGE 3833260 5'
783	10228	20044	1.66	8.0E-82	U06988.1	NT	601677339FT NIH_MGC_9 Homo sapiens cDNA clone IMAGE 3833260 5'
783	10228	20044	1.66	8.0E-82	U06988.1	NT	601677339FT NIH_MGC_9 Homo sapiens cDNA clone IMAGE 3833260 5'
797	10726	20566	2.17	8.0E-82	U06988.1	NT	601677339FT NIH_MGC_9 Homo sapiens cDNA clone IMAGE 3833260 5'
8499	10795	20645	1.11	8.0E-82	U06988.1	NT	601677339FT NIH_MGC_9 Homo sapiens cDNA clone IMAGE 3833260 5'
1475	11380	21244	1.12	8.0E-82	AB037748.1	NT	601677339FT NIH_MGC_9 Homo sapiens cDNA clone IMAGE 3833260 5'
1636	11540	21400	1.24	8.0E-82	6715601	NT	601677339FT NIH_MGC_9 Homo sapiens cDNA clone IMAGE 3833260 5'
4150	14050	23825	0.81	8.0E-82	8923432	EST HUMAN	601677339FT NIH_MGC_9 Homo sapiens cDNA clone IMAGE 3833260 5'
1434	11339	22330	1.27	7.0E-82	BF038327.1	EST HUMAN	601677339FT NIH_MGC_9 Homo sapiens cDNA clone IMAGE 3833260 5'
2399	12601	22495	1.82	7.0E-82	AU144050.1	EST HUMAN	601677339FT NIH_MGC_9 Homo sapiens cDNA clone IMAGE 3833260 5'
4034	13937	23713	0.81	5.0E-82	AA515572.1	EST HUMAN	601677339FT NIH_MGC_9 Homo sapiens cDNA clone IMAGE 3833260 5'

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Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1647	11551	21412	6.51	4.0E-82	AF081484.1	NT	Homo sapiens alpha-tubulin isoform 1 mRNA, complete cds
8954	19761	20554	6.47	4.0E-82	AF07300.1	EST_HUMAN	vp1609.x1 NC1_CGAP_Bnc05 Homo sapiens cDNA clone IMAGE:2467824 3' similar to TR-O75276
9519	19130		6.19	4.0E-82	AF027012	NT	O75276 PDI 1
276	10242	20051	13.75	3.0E-82	4502166	NT	Homo sapiens presenilin-1 gene, exons 1 and 2
897	10920	20446	2.19	3.0E-82	BE00705.1	EST_HUMAN	Homo sapiens amyloid beta (A4) precursor protein (protease nexin-1, Alzheimer disease) (APP), mRNA
770	10700	20639	4.44	3.0E-82	5174702	NT	Homo sapiens transforming growth factor beta-activated kinase-binding protein 1 (TAB1), mRNA
852	10779	20629	3.22	3.0E-82	4502166	NT	Homo sapiens amyloid beta (A4) precursor protein (protease nexin-1, Alzheimer disease) (APP), mRNA
1045	10363		13.76	3.0E-82	AA72848.1	EST_HUMAN	452405.st01 Soares, Texas, NHT Homo sapiens cDNA clone 133948 3'
1333	11240	21068	6.47	3.0E-82	AF075073.1	EST_HUMAN	RC2-PT0001-150100-021-B02 PT0001 Homo sapiens cDNA
1450	11355	21219	2.03	3.0E-82	AF08326.2	NT	Homo sapiens chromosome 21 segment HS21C065
1850	11755	21630	1.82	3.0E-82	BE81232.1	EST_HUMAN	RG1-BN0005-260700-018-p04 BN0005 Homo sapiens cDNA
1961	11855	21744	0.9	3.0E-82	4501622	NT	Homo sapiens adenylate cyclase activating polyphosphate 1 (plutellin) receptor type 1 (ADCVAP1R1) mRNA
3234	13188		2.06	3.0E-82	5453811	NT	Homo sapiens neurotrophic tyrosine kinase, receptor, type 2 (NTRK2) mRNA
4836	14718	24501	0.91	3.0E-82	AA138979.1	EST_HUMAN	262950.41 Strelow lung carcinoma 627248 Homo sapiens cDNA clone IMAGE 566711 5' similar to
6738	15817	25807	2.84	3.0E-82	11423206	NT	SW-PAGT_BOVIN_O07537 POLYPEPTIDE N-ACETYL GALACTOSAMINYL TRANSFERASE 1
7534	17304	27228	3.78	3.0E-82	AB020001.1	NT	Homo sapiens ankyrin-like with transmembrane domains 1 (ANKTM1) mRNA
7654	17504	27229	3.78	3.0E-82	AB020001.1	NT	Homo sapiens mRNA for KIAA1077 protein, partial cds
852	10520	20326	1.92	2.0E-82	AB020216.1	NT	Homo sapiens mRNA for KIAA0698 protein, partial cds
852	10520	20327	1.82	2.0E-82	AB020216.1	NT	Homo sapiens mRNA for KIAA0698 protein, partial cds
1980	11562	21428	1.75	2.0E-82	AB04390.1	EST_HUMAN	DKT-Z434M117.J1 434 (synonym: hies3) Homo sapiens cDNA clone DKFZp-34M117.5
3772	13834	23466	1.14	2.0E-82	D87675.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
4140	14040	23815	1.14	2.0E-82	4504116	NT	Homo sapiens glutamate receptor, ionotropic, kainate 1 (GRIK1) mRNA
4468	14352	24143	0.98	2.0E-82	AB020019.1	NT	Homo sapiens mRNA for KIAA1068 protein, partial cds
4468	14352	24144	0.98	2.0E-82	AB020019.1	NT	Homo sapiens mRNA for KIAA1068 protein, partial cds
4768	14553	24441	3.18	2.0E-82	AF04555.1	NT	Homo sapiens wdr57 (WDR57) and wdr57 (WDR57) genes, complete cds, alternatively spliced and
5013	14837	24553	1.66	2.0E-82	4507580	NT	replication factor C subunit 2 (RFC2) gene, complete cds
5013	14837	24554	1.66	2.0E-82	4507580	NT	Homo sapiens tumor necrosis factor receptor superfamily, member 5 (TNFRSF5) mRNA

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Tpo) HR BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5358	15278	26108	2.37	2.0E-42	AB018270.1	NT	Homo sapiens mRNA for KIAA00727 protein, partial cds
5746	19554	26792	4.96	2.0E-42	AF234882.1	NT	Homo sapiens FAM641 splice variant a (FAM641) mRNA, complete cds
6834	16713	26906	2.23	2.0E-42	11321670	NT	Homo sapiens slt (Drosophila) homolog 3 (SLIT3) mRNA
7821	17871	27912	1.2	2.0E-42	Y08032.1	NT	Human endogenous retrovirus-K, LTR US and gag gene
7821	17871	27913	1.2	2.0E-42	Y08032.1	NT	Human endogenous retrovirus-K, LTR US and gag gene
8628	18463	26769	6.98	2.0E-42	U80736.1	NT	Homo sapiens CAG19 mRNA, partial cds
8628	18463	26767	6.98	2.0E-42	U80736.1	NT	Homo sapiens CAG19 mRNA, partial cds
6097	18858	26767	2.23	2.0E-42	NG4920.1	EST HUMAN	2431410.1 Scores: pericardial tumor, NbrFA. Homo sapiens cDNA clone IMAGE:305203 3'
9322	19205	26767	2.57	2.0E-42	AA011278.1	EST HUMAN	201902.1 Scores: fetal liver, spleen, INFLS. S1 Homo sapiens cDNA clone IMAGE:429558 5'
9323	19305	26767	1.44	2.0E-42	AA011278.1	EST HUMAN	Homo sapiens SRY (sex determining region Y) box 10 (SOX10) mRNA
577	10516	20321	1.43	1.0E-42	11549224	NT	Homo sapiens melanoma differentiation associated protein-5 (MDA5) mRNA
1190	11100	21020	0.9	1.0E-42	BE985106.1	EST HUMAN	6015108981 NIH MGC_71 Homo sapiens cDNA clone IMAGE:3612207 5'
1264	11171	21020	1.91	1.0E-42	BE985106.1	EST HUMAN	RC4BT0310-110300-01E.K0 BT0310 Homo sapiens cDNA
1265	11172	21021	0.83	1.0E-42	AB011110.2	NT	Homo sapiens mRNA for KIAA0539 protein, partial cds
7882	17132	21021	1.38	1.0E-42	BE515338.1	EST HUMAN	U14-BW1:apc4-03-01.U1 si NCI CGAP_S027 Homo sapiens cDNA clone IMAGE:3084053 3'
8128	18106	26284	2.57	1.0E-42	AL163208.2	NT	Homo sapiens rhombosome 21 segment HS21C099
8373	18250	26500	1.75	1.0E-42	AL163208.2	NT	Homo sapiens rhombosome 21 segment HS21C099
7057	16934	27124	4.7	9.0E-43	BF57220.1	EST HUMAN	3021804055 NIH MGC_31 Homo sapiens cDNA clone IMAGE:4291551 5'
1302	17257	27166	1.88	8.0E-43	BE36973.1	EST HUMAN	3007273365 NIH MGC_20 Homo sapiens cDNA clone IMAGE:3614382 5'
1656	12947	21422	1.98	8.0E-43	BN9951.1	EST HUMAN	246812.1 Scores: fetal liver, spleen, INFLS. Homo sapiens cDNA clone IMAGE:266823 3'
2836	12764		1.54	7.0E-43	AA584695.1	EST HUMAN	nc02901.31 NCI CGAP_P061 Homo sapiens cDNA clone IMAGE:1100497 3' similar to contains A1u repetitive element;
4710	14598		5.49	7.0E-43	BF221813.1	EST HUMAN	7678707.1 NCI CGAP_P028 Homo sapiens cDNA clone IMAGE:3647883 3' similar to TRC09Y316 G9Y316 D1207H1.1 ;
397	10343	20169	1.34	6.0E-43	M33320.1	NT	Human platelet Glycoprotein IIb (GPIIb) gene, exons 2-29
1747	11647	21515	1.5	6.0E-43	AW570088.1	EST HUMAN	HL1083.X1 Scores: NFL_T_CBG. S1 Homo sapiens cDNA clone IMAGE:2933523 3' similar to
2984	12912	22709	1.08	6.0E-43	AW570088.1	EST HUMAN	SW-VB228:HAEN P4471 HYPOTHETICAL PROTEIN H0034. ;
3313	12959	22751	0.94	6.0E-43	AA701457.1	EST HUMAN	QV1-ST0234-181199-037-405 ST0234 Homo sapiens cDNA
3315	13431	22321	0.95	6.0E-43	11430241	NT	356cd5.1 Scores: fetal liver, spleen, INFLS. S1 Homo sapiens cDNA clone IMAGE:435089 3'
5236	16180	24928	1.72	6.0E-43	4507865	NT	Homo sapiens hypothetical protein FL10379 (FLJ10379), mRNA and translated products
5699	13579	25879	2.13	6.0E-43	AJ010770.1	NT	Homo sapiens VAMP (vesicle-associated membrane protein)-associated protein A (33K) (VAPA) mRNA, and translated products
6430	16291	26432	1.79	6.0E-43	11420204	NT	Homo sapiens putative proto-oncogene (hepatocyte growth factor receptor) (MET), mRNA

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7676	17430	27644	6.77	6.0E-83	4503314	NT	Human sapiens myosin (M-protein 2) (6550) (MYO2), mRNA
8817	19830		6.32	8.0E-83	AA48105.1	EST_HUMAN	af1461 at Stragline Lung (8507210) Homo sapiens cDNA clone IMAGE:640610 3' similar to contains THR12 THR repetitive element
9080	18834		3.11	6.0E-83	AF240786.1	NT	Human sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds
931	10866		4.14	5.0E-83	U17883.1	NT	Human succinyl dehydrogenase iron-protein subunit (sdhB) gene, exon 5
2004	12649		2.1	5.0E-83	AF003005.1	NT	Human sapiens 20S proteasome regulatory subunit (SUG2) mRNA, complete cds
9686	13500	23289	0.92	5.0E-83	AL133207.2	NT	Novel human gene mapping to chromosome X
8011	14885	24851	10.99	5.0E-83	4557013	NT	Human sapiens cathepsin (CAT) mRNA
8011	14885	24852	10.99	5.0E-83	4557013	NT	Human sapiens cathepsin (CAT) mRNA
5094	14894	24739	0.88	5.0E-83	AF033427.1	NT	Human sapiens dihydropyridine receptor alpha 2 subunit (CACNA2D1) gene, exon 11
624	10981	20373	1.47	4.0E-83	AF224899.1	NT	Human sapiens mannitolase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2D 3 (UBE2D3) genes, complete cds
3489	13386	23180	0.96	4.0E-83	BE86078.1	EST_HUMAN	80181180FT NIH_MGC_71 Homo sapiens cDNA clone IMAGE:391316 5'
891	10904		4.5	3.0E-83	AA35831.1	EST_HUMAN	EST179542 Pilocarpine I Homo sapiens cDNA similar to similar to endogenous retrovirus ERV9
2790	12612		1.82	3.0E-83	AA632954.1	EST_HUMAN	1087307 at NC1 CGAP_Thy1 Homo sapiens cDNA similar to similar to contains THR12 THR repetitive element
1789	11868	21528	1.8	2.0E-83	AA630492.1	EST_HUMAN	356405 at Saccus testis, NIH1 Homo sapiens cDNA clone IMAGE:1021602 3' similar to TRQ2814
1789	11868	21530	1.8	2.0E-83	AA630492.1	EST_HUMAN	Q92814 MYELOBLAST K14A0216.1
1883	11779	21664	2.23	2.0E-83	AA66561.1	EST_HUMAN	Q92814 MYELOBLAST K14A0216.1
2821	12150	22542	1.11	2.0E-83	BE26894.1	EST_HUMAN	246872 at Saccus testis, NIH1 Homo sapiens cDNA clone IMAGE:256623 3'
3231	13156		1.82	2.0E-83	11430834	NT	RC8-E10046-281000-034712 E10046 Homo sapiens cDNA
3708	13921		1	2.0E-83	AF163202.2	NT	Human sapiens cat (Oncofetal) like 1 (SALL1), mRNA
4241	11140	23916	4.47	2.0E-83	AF202970.1	NT	Human sapiens hemopoietic progenitor cell antigen CD34 precursor (CD34) mRNA, partial cds
4583	14446	24230	8.13	2.0E-83	7703598	NT	Human sapiens erythropoietin repeat-containing protein ASB-2 (LOC51676), mRNA
4583	14446	24231	8.13	2.0E-83	7703598	NT	Human sapiens erythropoietin repeat-containing protein ASB-2 (LOC51676), mRNA
8359	16279	25105	23.36	2.0E-83	11024711	NT	Human sapiens myosin, heavy polypeptide 4, skeletal muscle (MYH4), mRNA
8359	16279	25106	23.36	2.0E-83	11024711	NT	Human sapiens myosin, heavy polypeptide 4, skeletal muscle (MYH4), mRNA
6395	16356	26419	5.9	2.0E-83	AF125833.1	NT	Human sapiens F-box protein FBX3 (FBX3), partial cds
6559	16339	26736	1.82	2.0E-83	U6707.1	NT	Rattus norvegicus desmin-180 mRNA, complete cds
8839	16718	25911	2.86	2.0E-83	AF011020.1	NT	Human sapiens protein kinase CK2 catalytic subunit alpha gene, exon 1
8839	16718	25912	2.86	2.0E-83	AF011020.1	NT	Human sapiens protein kinase CK2 catalytic subunit alpha gene, exon 1

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (10p) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7167	17617	27845	3.32	2.0E-83	M22094.1	NT	Human neural cell adhesion molecule (N-CAM) secreted isoform mRNA, 3' end
7167	17617	27846	3.32	2.0E-83	M22094.1	NT	Human neural cell adhesion molecule (N-CAM) secreted isoform mRNA, 3' end
7628	17676	27620	1.21	2.0E-83	ALU17659.1	EST_HUMAN	ALU17659 HEBA1 Homo sapiens cDNA clone HEBA1001910 5'
8228	18105	26398	3.7	1.10E-048	NT		Human sapiens KIA00865 protein (KIA00865), mRNA
8228	18105	28422	1.82	2.0E-83	AL134452.1	EST_HUMAN	DKF2p547j135.11 547 (synonym: h181) Homo sapiens cDNA clone DKF2p547j135.5'
8228	18177	28423	1.82	2.0E-83	AL134452.1	EST_HUMAN	DKF2p547j135.11 547 (synonym: h181) Homo sapiens cDNA clone DKF2p547j135.5'
8637	18226		3.48	2.0E-83	AB011399.1	NT	Homo sapiens gene for AFX, complete cds
1390	11295	21162	16.57	1.0E-83	4594326	NT	Homo sapiens hydroxyacyl-Coenzyme A dehydrogenase/6-ketoglutarate-Coenzyme A thiolase-erythro-Coenzyme A hydratase (trifunctional protein), beta subunit (HADHB) mRNA
1920	11295	21163	16.57	1.0E-83	4594326	NT	Homo sapiens hydroxyacyl-Coenzyme A dehydrogenase/6-ketoglutarate-Coenzyme A thiolase-erythro-Coenzyme A hydratase (trifunctional protein), beta subunit (HADHB) mRNA
2033	12485	22378	1.6	1.0E-83	BE838899.1	EST_HUMAN	801907379F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE3908744 5'
3148	13071	22672	0.84	1.0E-83	7682249	NT	Homo sapiens cell recognition molecule Casp2 (KIA00888), mRNA
3783	13768	23491	3.55	1.0E-83	AF053765.1	NT	Human norvegicus brain specific carboxyl-binding protein GBP60 mRNA, partial cds
4181	14051	23826	2.22	1.0E-83	U28822.1	NT	H. sapiens gene for mitochondrial adenosine/CoA delta-isomerase, exon 3
4789	14674	24491	1.36	1.0E-83	4592166	NT	Homo sapiens amyloid beta (A4) precursor protein (probable intron), Alzheimer disease (APP), mRNA
6022	16926	26057	1.76	1.0E-83	A027614.1	EST_HUMAN	606805.X1 Soares_test8_NHT Homo sapiens cDNA clone IMAGE1045431 3' similar to gb186241 QM
3727	13339	23425	2.62	7.0E-84	BE901209.1	EST_HUMAN	60161623F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE3905853 5'
1273	11180	21028	4.21	6.0E-84	BE838894.1	EST_HUMAN	RC2-FN0119-200005-01T-965 FN0119 Homo sapiens cDNA
1273	11180	21028	4.21	8.0E-84	BE838894.1	EST_HUMAN	RC2-FN0119-200005-01T-965 FN0119 Homo sapiens cDNA
2348	12228	22125	4.76	6.0E-84	AA776574.1	EST_HUMAN	cc66603.11 Stolidagen schizo brain S11 Homo sapiens cDNA clone IMAGE391620 3'
5206	15085		9.24	6.0E-84	AL042863.2	EST_HUMAN	DKF2p544H0322.1 J131 (synonym: h183) Homo sapiens cDNA clone DKF2p544H0322 5'
8388	18307	25160	1.7	6.0E-84	AA887339.1	EST_HUMAN	947603.X1 Soares_NFL_T_GHC_S1 Homo sapiens cDNA clone IMAGE1400900 3' similar to gb1814386
6415	18277	28440	3.17	6.0E-84	BE810371.1	EST_HUMAN	VITAMIN K DEPENDENT PROTEIN 5 PRECURSOR (HUMAN);
6708	16586	28747	1.9	6.0E-84	BE770199.1	EST_HUMAN	PN01-10019-160005-004-R02 LT10019 Homo sapiens cDNA
8821	18634		1.94	6.0E-84	AAV36912.1	EST_HUMAN	PN01-10054-160005-004-R10 FT10054 Homo sapiens cDNA
6937	10830	20496	1.06	5.0E-84	AA382811.1	EST_HUMAN	IL0-8710054-061169-139-ec08 BT10168 Homo sapiens cDNA
2031	12203		1.01	5.0E-84	AF1109718.1	EST_HUMAN	EST190054 Tcd1a1 Homo sapiens cDNA 5' end
8830	18043	28626	2.78	5.0E-84	AF1109718.1	NT	Homo sapiens rhinovirus 3 subgenomic region
1334	11290	21116	1.08	4.0E-84	AB037735.1	NT	Homo sapiens regulatory factor X_3 (influences H4 class II expression) (RFX3), mRNA

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Probe SEQ ID NO.	Exon ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1389	11294	21151	4.03	4.0E-84	AF065321.1	EST_HUMAN	Wt760c4.1 Soares, NFL_T_GBC.S1 Homo sapiens cDNA clone IMAGE:2302089 3' similar to
4869	14749	24529	1.76	4.0E-84	AF063001.2	NT	SW-INDO_HUMAN O43947 NADOLYSIN PRECURSOR ;
5000	14630	24701	1.27	4.0E-84	U94982.1	NT	Homo sapiens myosin light chain kinase isoform 2 (MLCK) mRNA, complete cds
5416	15336	25388	1.31	4.0E-84	U1398108.1	NT	Human 2,4-dienoyl-CoA reductase gene, exons 3 and 4
5416	15336	25388	1.31	4.0E-84	U1398108.1	NT	Homo sapiens protein tyrosine phosphatase, receptor type, G (PTPRG), mRNA
5781	15597	25905	2.35	4.0E-84	AF059550.1	NT	Homo sapiens protein tyrosine phosphatase, receptor type, G (PTPRG), mRNA
6607	18069	25543	12.15	4.0E-84	U1421326.1	NT	Homo sapiens histone deacetylase 3 (HDAC3) gene, complete cds
8290	18169	28413	6.50	4.0E-84	AB032955.1	NT	Homo sapiens KIAA0783 gene product (KIAA0783), mRNA
313	10275	20094	1.35	3.0E-84	AF026200.1	NT	Homo sapiens mRNA for KIAA1130 protein, partial cds
1137	11061	20891	0.89	3.0E-84	U759081.1	NT	Homo sapiens Ets1 protein homolog mRNA, partial cds
1917	11812	21690	1.15	3.0E-84	U543845.1	NT	Homo sapiens chondroitin sulfate proteoglycan 2 (versican) (CSPG2) mRNA
1982	11856	21745	3.03	3.0E-84	AF069890.1	NT	Homo sapiens perlecanin material 1 (POM1) mRNA
3542	13459	23251	1.18	3.0E-84	AF026398.1	NT	Novel human mRNA containing Zinc finger C2H2 type domains
3989	13902	23389	4.11	3.0E-84	AF014459.1	NT	Homo sapiens DNA DLEG1 to ORCTL4 gene region, section 1/2 (DLEG1, ORCTL3, ORCTL4 genes, complete cds)
8235	18133		7.8	3.0E-84	AF063301.1	EST_HUMAN	Homo sapiens X-linked juvenile atrophic keratosis precursor protein (ALRS1) mRNA, complete cds
2058	11943	21845	5.89	2.0E-84	BE055397.1	EST_HUMAN	Wt23058.1 Soares, D13C12c2c3_cdn1_N402 Homo sapiens cDNA clone IMAGE:230589 3' similar to
2058	11943	21845	5.89	2.0E-84	BE055397.1	EST_HUMAN	beta2058.935 RBOSOMAL PROTEIN L18A (HUMAN)
2913	12840	22840	9.55	2.0E-84	AF03943.1	NT	CMT-810705-100500-272-308 E10708 Homo sapiens cDNA
2932	12850	22850	0.83	2.0E-84	X68211.1	NT	Homo sapiens myelin transcription factor 1-like (MYT1L) mRNA, complete cds
4682	14568	24364	1.11	2.0E-84	BF309518.1	EST_HUMAN	H.sapiens DNA for endogenous retroviral like element
4682	14568	24364	1.11	2.0E-84	BF309518.1	EST_HUMAN	601887664F1 NIH_IMGC_17 Homo sapiens cDNA clone IMAGE:4121727 5'
6695	16576		1.67	2.0E-84	AF28674.1	EST_HUMAN	qm87609.x1 NCJ_GCAP_L16 Homo sapiens cDNA clone IMAGE:4121727 5'
8308	16003	25334	1.89	2.0E-84	BF48000.1	EST_HUMAN	nead002.x1 Lupaik, lymphatic, trunk Homo sapiens cDNA clone IMAGE:4000251 3' similar to
9308	19003	25335	1.89	2.0E-84	BF48000.1	EST_HUMAN	nead002.x1 Lupaik, lymphatic, trunk Homo sapiens cDNA clone IMAGE:4000251 3' similar to
309	10271	20090	1.53	1.0E-84	AF14488.1	NT	TR-09UGSS 09UGSS D.796G23.1 ;
			1.89	1.0E-84	AF14488.1	NT	TR-09UGSS 09UGSS short isoform (ITSN) mRNA, complete cds
537	10478	20260	5.2	1.0E-84		NT	Homo sapiens tyrosine 3-monooxygenase/tyrosinase 5-monooxygenase activation protein, zella polypeptide (VWHAZ) mRNA
703	10636		0.60	1.0E-84		NT	Homo sapiens complement component 5 (C5), mRNA
1271	11178	21026	1.92	1.0E-84	AF084379.1	EST_HUMAN	am58b11.x1 Sinuagene schizo brain S11 Homo sapiens cDNA clone IMAGE:192985 3'

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2008	11600	21790	3.13	1.0E-84	BE362137.1	EST_HUMAN	601300006NH1.MOC_44 Homo sapiens cDNA clone IMAGE:3820287 5'
2076	12003	21964	1.06	1.0E-84	11427197	NT	Homo sapiens pericardial material 1 (PCV1), mRNA
3179	13065	23391	2.14	1.0E-84	AAT20851.1	EST_HUMAN	HW2406.51 NG_CGAP_SST Homo sapiens cDNA clone IMAGE:1239100 3'
4319	14216	23969	5.99	1.0E-84	AJ220041.1	NT	Homo sapiens 959 to contig between AL.1 and CSRT on chromosome 21:22; segment 1/3
4601	14480	24275	3.82	1.0E-84	AL043314.2	EST_HUMAN	DKFZP434N0322.1 434 (synonym: hias3) Homo sapiens cDNA clone DKFZP434N0322 5'
4601	14480	24275	3.82	1.0E-84	AL043314.2	EST_HUMAN	DKFZP434N0322.1 434 (synonym: hias3) Homo sapiens cDNA clone DKFZP434N0322 5'
4623	14216	23969	4.29	1.0E-84	AJ220041.1	NT	Homo sapiens 959 to contig between AL.1 and CSRT on chromosome 21:22; segment 1/3
5757	15605	25773	1.52	1.0E-84	S7482.1	NT	Uterine water channel-28 kDa erythrocyte integral membrane protein homolog [human, uterus, mRNA, 1340 nt]
6113	16007	26143	1.49	1.0E-84	AL049784.1	NT	Novel human gene mapping to chromosome 13
6113	16007	26144	1.49	1.0E-84	AL049784.1	NT	Novel human gene mapping to chromosome 13
6220	16085	26238	1.96	1.0E-84	AL049784.1	NT	Novel human gene mapping to chromosome 13
8414	16278	26459	3.12	1.0E-84	8933924.1	NT	Homo sapiens polymerase (DNA directed), alpha (POLA), mRNA
8483	16324	26460	1.6	1.0E-84	11430948	NT	Homo sapiens NQF1A, binding protein 1 (ERG1 binding protein 1) (NAB1), mRNA
7405	17065	21417	2.45	1.0E-84	833034.1	NT	Homo sapiens nuclear transport factor 2 (nuclear protein 15) (TFP15), mRNA
7636	15091	21484	1.65	1.0E-84	4607848	NT	Homo sapiens ubiquitin specific protease 13 (ubiquitinase 13) (USP13), mRNA
7636	15091	21485	1.65	1.0E-84	4607848	NT	Homo sapiens ubiquitin specific protease 13 (ubiquitinase 13) (USP13), mRNA
9160	18023	24965	2.98	1.0E-84	11417812	NT	Homo sapiens putative receptor P2X2-like 1, orphan receptor (P2RXL1), mRNA
9286	18068	25530	9.8	1.0E-84	11416165	NT	Homo sapiens acylase 2, mitochondrial (AC02), mRNA
951	10975	20516	1.71	9.0E-85	AL163268.2	NT	Homo sapiens chromosome 21 segment HS21C068
1057	10074	20516	2.3	9.0E-85	U1432.1	NT	Homo sapiens nuclear protein Slp mRNA, complete cds
1057	10074	20517	2.3	9.0E-85	U1432.1	NT	Homo sapiens nuclear protein Slp mRNA, complete cds
1560	11465	21322	1.07	9.0E-85	M33282.1	NT	Human plurinogen gene, exon 7
1560	11465	21323	1.07	9.0E-85	M33282.1	NT	Human plurinogen gene, exon 7
1651	11954	21417	4.93	9.0E-85	7657020	NT	Homo sapiens DKFZP434P211 protein (DKFZP434P211), mRNA
4158	14039	23932	0.94	9.0E-85	AL163268.2	NT	Homo sapiens chromosome 21 segment HS21C080
4778	14602	24449	1.14	9.0E-85	5901970	NT	Homo sapiens heat shock transcription factor 2 binding protein (HSF2BP), mRNA
4825	14707	24491	1.01	9.0E-85	AL163268.2	NT	Homo sapiens chromosome 21 segment HS21C068
8616	11554	21417	1.27	9.0E-85	7657020	NT	Homo sapiens DKFZP434P211 protein (DKFZP434P211), mRNA
1120	11035	20677	3.24	7.0E-85	U05094.1	NT	Homo sapiens ribosomal protein L27 mRNA, complete cds
8610	18178		5.81	7.0E-85	AF11310.1	NT	Homo sapiens MSTP030 mRNA, complete cds
8718	18535	28519	2.59	6.0E-85	11438573	NT	Homo sapiens DEAD/H (Asp-Glu-Ala-Gly) box polypeptide 10 (RNA helicase) (DDX10), mRNA



Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8718	18335	28920	2.56	6.0E-95	11439573	NT	Homo sapiens DE/ADH1 (Apo-Glu-Ala-Asp-His) box polypeptide 10 (RNA helixase) (DDX10), mRNA
2285	12168	22066	1.21	5.0E-95	AL103284.2	NT	Homo sapiens chromosome 21 segment HS21 C094
8482	18335	28998	1.9	5.0E-95	AF224899.1	NT	Homo sapiens mannitolase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2D 3 (UBE2D3) genes, complete cds
6886	16094		2.45	5.0E-95	AF21189.1	NT	Homo sapiens T-type calcium channel alpha1 subunit Alpha1-a isoform (CACNA1I) mRNA, complete cds
5738	15946	25751	1.89	4.0E-95	BF077910.1	EST_HUMAN	602084730/F2 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:524057 5'
5735	15946	25752	1.60	4.0E-95	BF077910.1	EST_HUMAN	602084730/F2 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:524057 5'
8017	17987		1.85	4.0E-95	BC076263.1	EST_HUMAN	RC1-BT0023-120200-011-c07 BT0623 Homo sapiens cDNA
9237	19549		1.97	4.0E-95	216937.1	EST_HUMAN	HIS-HEG003 Strategene cDNA library Human heart, cat936208 Homo sapiens cDNA clone HEG003
12771	11185	21035	1.15	3.0E-95	AF069157.1	NT	Homo sapiens protein phosphatase 2A BR gamma subunit gene, exon 8
17411	11942	21269	3.37	3.0E-95	T07483.1	EST_HUMAN	ve55g09.r1 Soares fetal liver spleen 1NfLS Homo sapiens cDNA clone IMAGE:121504 5'
4219	14117	23994	0.94	3.0E-95	BE287183.1	EST_HUMAN	G0118070/F2 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3533918 5'
4905	14993	24473	1.73	3.0E-95	11024695	NT	Homo sapiens F-box only protein 24 (FBXO24), mRNA
4905	14993	24476	1.73	3.0E-95	11024695	NT	Homo sapiens F-box only protein 24 (FBXO24), mRNA
4864	14744	24523	8.66	3.0E-95	J3046793.1	NT	Homo sapiens mRNA for KIAA1563 protein, partial cds
4893	14764	24530	0.94	3.0E-95	7653442	NT	Homo sapiens effector receptor family 13, subfamily D, member 2 (OR222), mRNA
5729	15939	25739	6.84	3.0E-95	7652309	NT	Homo sapiens KIAA0793 gene product (KIAA0793), mRNA
5729	15939	25740	6.84	3.0E-95	7652309	NT	Homo sapiens KIAA0793 gene product (KIAA0793), mRNA
8728	16025	25740	6.84	3.0E-95	7652309	NT	Homo sapiens KIAA0793 gene product (KIAA0793), mRNA
8728	16025	25740	6.84	3.0E-95	7652309	NT	Homo sapiens KIAA0793 gene product (KIAA0793), mRNA
8584	16174	25983	1.61	3.0E-95	U46943.1	NT	Homo sapiens mRNA for cytosolic heavy chain (CNAH5) gene
7100	17697	27566	4.06	3.0E-95	11439089	NT	Homo sapiens CENP mRNA, complete cds
8760	18610	28901	2.28	3.0E-95	9531950	NT	Homo sapiens phosphatase C, epsilon (PLCE), mRNA
9780	19296		2.69	3.0E-95	11416177	NT	Homo sapiens EGF-like repeats and disordin like domains 3 (EDL3), mRNA
							Homo sapiens Ran GTPase activating protein 1 (RANGAP1), mRNA
947	10871	20719	0.67	2.0E-95	7657263	NT	Homo sapiens KIAA0929 protein Mex2 interacting nuclear target (MINT) homolog (KIAA0929), mRNA
1024	10942	20786	1.85	2.0E-95	AF248490.1	NT	Homo sapiens Intersectin 2 (SHD15) mRNA, complete cds
1400	11305	21164	7.1	2.0E-95	5174775	NT	Homo sapiens apolipoprotein C-II (APOC2) mRNA
1400	11305	21165	7.1	2.0E-95	5174775	NT	Homo sapiens apolipoprotein C-II (APOC2) mRNA
2183	12070	21972	7.1	2.0E-95	U10525.1	NT	Human DNA polymerase beta gene, exon 12 and 13
2763	11222		4.24	2.0E-95	76574938	NT	Homo sapiens similar to rat integral membrane glycoprotein POM121 (POM121L1), mRNA
4239	14139	23513	5.42	2.0E-95	4505930	NT	Homo sapiens plasminogen (PLG) mRNA

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Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4822	14706	24486	1.3	2.0E-95	AL103264.2	NT	Homo sapiens chromosome 21 segment HS210884
7341	17269	27408	1.29	2.0E-95	AF008820.1	EST_HUMAN	Wt6705.x1 NCI CGAP Kid12 Homo sapiens cDNA clone IMAGE:239491 3' similar to contains element MSRT repetitive element
2241	12726	2241	2.44	1.0E-95	BE794306.1	EST_HUMAN	601491416FT NIH MGC 67 Homo sapiens cDNA clone IMAGE:3945618 5'
2344	12224	22121	8.09	1.0E-95	BE18392.1	EST_HUMAN	601462817FT NIH MGC 67 Homo sapiens cDNA clone IMAGE:3985021 5'
2444	12224	22122	8.09	1.0E-95	BE18392.1	EST_HUMAN	601462817FT NIH MGC 67 Homo sapiens cDNA clone IMAGE:3985021 5'
7632	17483	27704	2.06	1.0E-95	BE25917.1	EST_HUMAN	60100739FT NIH MGC 16 Homo sapiens cDNA clone IMAGE:3350653 5'
8290	18175	28419	2.86	1.0E-95	AA778785.1	EST_HUMAN	245803.s1 Sources fetal liver spleen INFILS_S1 Homo sapiens cDNA clone IMAGE:453245 3'
8290	18175	28420	2.96	1.0E-95	AA778785.1	EST_HUMAN	245803.s1 Sources fetal liver spleen INFILS_S1 Homo sapiens cDNA clone IMAGE:453245 3'
8395	18242	28492	2.28	1.0E-95	BF111552.1	EST_HUMAN	601897003FT NIH MGC 19 Homo sapiens cDNA clone IMAGE:4128440 5'
8395	18242	28493	2.28	1.0E-95	BF111552.1	EST_HUMAN	601897003FT NIH MGC 19 Homo sapiens cDNA clone IMAGE:4128440 5'
9164	16052	25283	3.7	1.0E-95	11417692.1	EST_HUMAN	Homo sapiens calcineurin binding protein 1 (KIA0330), mRNA
9448	18082	25283	3.43	1.0E-95	11417692.1	EST_HUMAN	Homo sapiens calcineurin binding protein 1 (KIA0330), mRNA
1410	11315		7.06	9.0E-96	BE27421.1	EST_HUMAN	601120778FT NIH MGC 20 Homo sapiens cDNA clone IMAGE:2687660 5'
220	10160	20001	1.3	7.0E-96	7862247.1	EST_HUMAN	Homo sapiens KIA0090 gene product (KIA0090), mRNA
921	10945	20991	1.33	7.0E-96	AA96901.1	EST_HUMAN	498905.s1 Sources parathyroid tumor NChPA Homo sapiens cDNA clone IMAGE:1403559 3'
921	10945	20992	1.33	7.0E-96	AA96901.1	EST_HUMAN	498905.s1 Sources parathyroid tumor NChPA Homo sapiens cDNA clone IMAGE:1403559 3'
9164	15121	24068	6.91	7.0E-96	11421737.1	NT	Homo sapiens Tard (human F-cell leukemia virus type 1) binding protein 1 (TAX1BP1), mRNA
7078	16953	27146	2.81	7.0E-96	383557.1	NT	Homo sapiens gascoeur/breast/5 (GALG) gene, clone 15
7363	17444		1.63	7.0E-96	6453697.1	NT	Homo sapiens RAN binding protein 7 (RANBP7), mRNA
7624	17473	27898	2.35	7.0E-96	11253307.1	NT	Homo sapiens D-Glycyl synthetase critical region gene 2 (DCGR6), mRNA
8326	18206	29458	2.15	7.0E-96	11477012.1	NT	Homo sapiens similar to transcription factor CA150 (H sapiens) (L0083170), mRNA
8326	18206	29458	2.16	7.0E-96	11477012.1	NT	Homo sapiens similar to transcription factor CA150 (H sapiens) (L0083170), mRNA
1272	11779	21027	9.33	6.0E-96	45015492.1	NT	Homo sapiens coagulate dehydrogenase (lipomide) (CQDH), mRNA
204	10178	19893	1.48	4.0E-96	BE347173.1	EST_HUMAN	601179695FT NIH MGC 12 Homo sapiens cDNA clone IMAGE:3488890 5'
6977	16596	26886	10.18	4.0E-96	BE268943.1	EST_HUMAN	601179695FT NIH MGC 12 Homo sapiens cDNA clone IMAGE:3488890 5'
6957	10175	19893	1.9	4.0E-96	BE347173.1	EST_HUMAN	601072904FT NIH MGC 12 Homo sapiens cDNA clone IMAGE:3488890 5'
5435	15855	29411	6.02	3.0E-96	AW340946.1	EST_HUMAN	x2821.x21 NCI CGAP Lu24 Homo sapiens cDNA clone IMAGE:2687719 3'
7698	17718	27893	3.31	3.0E-96	BE366476.1	EST_HUMAN	601500696FT NIH MGC 71 Homo sapiens cDNA clone IMAGE:3811303 5'
7698	17718	27894	3.31	3.0E-96	BE366476.1	EST_HUMAN	601500696FT NIH MGC 71 Homo sapiens cDNA clone IMAGE:3811303 5'
8734	17983	28125	9.01	3.0E-96	AB69240.1	EST_HUMAN	tr18622.x1 NCI CGAP Pr28 Homo sapiens cDNA clone IMAGE:3281371 3'
9163	19650		2.02	3.0E-96	BE110354.1	EST_HUMAN	601302333FT NIH MGC 21 Homo sapiens cDNA clone IMAGE:3630793 5'
288	10231	20046	1.33	2.0E-96	AA006284.1	EST_HUMAN	ES1171252 Jurkat T-cells VI Homo sapiens cDNA 5' end
408	10364		1.67	2.0E-96	AL103203.2	NT	Homo sapiens chromosome 21 segment HS210003

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit E-Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1173	11035	20926	2.18	2.0E-46	N59877.1	EST_HUMAN	YctBcdH1 Soares, multiple sclerosis 2ND-HMSP Homo sapiens cDNA clone IMAGE:284478 g
2144	12032	21030	2.37	2.0E-46	9635487	NT	Human endogenous retrovirus, complete genome
2222	12207	22103	1.12	2.0E-46	AB033103.1	EST_HUMAN	Human sapiens mRNA for KIAA1277 protein, partial cds
3366	13268	23087	1.43	2.0E-46	AW968142.1	EST_HUMAN	ES1737825 YAGE sequences, MAGI Homo sapiens cDNA
3866	13569	23363	2.16	2.0E-46	AF156776.1	NT	Human sapiens hypophosphoric acid acyltransferase-delta (LPAAT-delta) mRNA, complete cds
3966	13569	23366	2.16	2.0E-46	AF156776.1	NT	Homo sapiens hypophosphoric acid acyltransferase-delta (LPAAT-delta) mRNA, complete cds
3854	13862	24380	2.43	2.0E-46	AW1515742.1	EST_HUMAN	h87g9p3.1 INI CGAP G08 Homo sapiens cDNA clone IMAGE:2916542.3
4678	14565	24380	2.8	2.0E-46	AF559403.1	NT	Homo sapiens cAMP specific phosphodiesterase 8A (PDE8A) mRNA, partial cds
4680	14565	25971	1.33	2.0E-36	U19411.1	NT	H.sapiens mRNA encoding phospholipase o
5580	15465	26572	1.53	2.0E-36	U16411.1	NT	H.sapiens mRNA encoding phospholipase o
6987	16864	27057	2.22	2.0E-46	11437195	NT	Homo sapiens butyrobetaine (gamma), 2-oxoglutarate dioxygenase (gamma-butyrobetaine hydroxylase) (BBOX), mRNA
6987	16864	27058	2.22	2.0E-46	11437195	NT	Homo sapiens butyrobetaine (gamma), 2-oxoglutarate dioxygenase (gamma-butyrobetaine hydroxylase) (BBOX), mRNA
7372	17241	27448	1.95	2.0E-46	11422264	NT	Homo sapiens chromosome segregation 1 (yeast homolog) like (OSE1L) mRNA
7398	17241	27448	1.95	2.0E-46	11422264	NT	Homo sapiens chromosome segregation 1 (yeast homolog) like (OSE1L) mRNA
7560	17819	28067	2.69	2.0E-46	11545846	NT	Homo sapiens basic-helix-loop-helix-PAS protein (NP433), mRNA
7560	17819	28062	2.69	2.0E-46	11545846	NT	Homo sapiens basic-helix-loop-helix-PAS protein (NP433), mRNA
8276	18376	28397	1.83	2.0E-46	AF475905.1	NT	Homo sapiens ribosomal protein S6 kinase, 90kD, polypeptide 5 (RP36K45) mRNA
8606	19187	26250	2.4	2.0E-46	11418159	NT	Homo sapiens thyroid autotautogen 70kD (Ku antigen) (G22P1) mRNA
9772	19260	27127	1.81	2.0E-36	AE011399.1	NT	Homo sapiens gene for A/F, complete cds
8955	19520	26139	1.47	2.0E-46	11417853	NT	Homo sapiens adrenocortic, beta, receptor kinase 2 (ADRBK2), mRNA
1570	11463	21543	3.1	1.0E-46	4438565	NT	Homo sapiens NADH dehydrogenase (ubiquinone) Fc-S protein 1 (75kD) (NADH-coenzyme Q reductase) (NDUFS1) mRNA
3126	13050	22847	2.06	1.0E-46	5453649	NT	Homo sapiens butlin 5 (FBLN5) mRNA
3197	13122	22927	2.42	1.0E-46	L24921.1	NT	Human gamma-glutamyl transpeptidase mRNA, complete cds
3256	13179	22977	1.32	1.0E-46	AL165209.2	NT	Homo sapiens chromosome 21 segment HS21C09
3256	13179	22978	1.32	1.0E-46	AL165209.2	NT	Homo sapiens chromosome 21 segment HS21C09
3964	13775	23566	1.148	1.0E-46	7706761	NT	Homo sapiens hypophthalic protein (LOC91319), mRNA
3964	13775	23569	1.148	1.0E-46	7706761	NT	Homo sapiens hypophthalic protein (LOC91319), mRNA
3864	13775	23569	1.148	1.0E-46	7706761	NT	Homo sapiens hypophthalic protein (LOC91319), mRNA
4167	14077	23842	6.76	1.0E-36	AL163900.2	NT	Homo sapiens chromosome 21 segment HS21C100
4832	14718	24497	1.11	1.0E-46	AF100751.1	NT	Homo sapiens FKBP5-binding protein FKBP3 isoform mRNA, complete cds
8882	15326	25378	2.15	1.0E-46	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
5297	15206		1.47	9.0E-37	AI180703.1	EST_HUMAN	ab77009.11 Soares, fetal, heart, NBH+16W Homo sapiens cDNA clone IMAGE:7106128.3 similar to SW-KIC1, mouse, P02595 KERATIN, TYPE I CYTOSKELETAL 10 ;

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Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6403	10264	26424	2	9.0E-87	4757721	NT	Homo sapiens a disintegrin and metalloprotease domain 22 (ADAM22), mRNA
6403	10264	26424	2	9.0E-87	4757721	NT	Homo sapiens a disintegrin and metalloprotease domain 22 (ADAM22), mRNA
471	10414	20203	14.17	8.0E-87	662245.1	NT	O cuticular mRNA for elongation factor 1 alpha
2250	12134	22031	2.74	7.0E-87	BF063211.1	EST_HUMAN	7H6802.X1 NCI CGAP, Cor16 Homo sapiens cDNA clone IMAGE:3322778 3'
2250	12134	22032	2.74	7.0E-87	BF063211.1	EST_HUMAN	7H6802.X1 NCI CGAP, Cor16 Homo sapiens cDNA clone IMAGE:3322778 3'
6763	16642	26826	2.67	7.0E-87	BF362776.1	EST_HUMAN	IL3-1710619-060700-188-010 HT10819 Homo sapiens cDNA
7794	17644	27876	3.38	7.0E-87	AF043314.2	EST_HUMAN	DKFZP434N0323.J1 434 (synonym: hnc3) Homo sapiens cDNA clone DKFZP434N0323 5'
7794	17644	27876	3.38	7.0E-87	AF043314.2	EST_HUMAN	DKFZP434N0323.J1 434 (synonym: hnc3) Homo sapiens cDNA clone DKFZP434N0323 5'
8294	18144	28384	10.88	7.0E-87	K03002.1	NT	Human mRNA from chromosome 15 gene with homology to MHC-HLA-SB-1 Intron A
8294	18144	28386	10.86	7.0E-87	K03002.1	NT	Human mRNA from chromosome 15 gene with homology to MHC-HLA-SB-1 Intron A
3432	13368	22303	0.87	9.0E-87	7667213	NT	Homo sapiens hominid unsequenced neu tumor-associated kinase (HUNK), mRNA
8638	18744	25863	1.73	6.0E-87	AB026004.1	NT	Homo sapiens mRNA for KIAA1081 protein, partial cds
8107	17987		3.52	9.0E-87	11432444	NT	Homo sapiens similar to SET translocation (myeloid leukemia-associated) (H. sapiens) (LOC63102), mRNA
1102	11056	20408	1.99	5.0E-87	AL382911.1	EST_HUMAN	EST19094, Testis 1 Homo sapiens cDNA 6 and
9450	11056	20408	1.93	5.0E-87	AL382911.1	EST_HUMAN	EST19094, Testis 1 Homo sapiens cDNA 6 and
930	10874	20721	1.33	4.0E-87	AL163210.2	NT	Homo sapiens chromosome 21 segment N3210
1195	11056	20972	10.94	4.0E-87	AB037835.1	NT	Homo sapiens mRNA for KIAA1174 protein, partial cds
1411	11316	21176	0.86	4.0E-87	R78133.1	EST_HUMAN	y6810.11 Scores placenta N024P Homo sapiens cDNA clone IMAGE:145579 5' similar to contains Au
1695	11878	21171	0.82	4.0E-87	AB007925.1	NT	repetitive element;
2372	12252	22142	1.07	4.0E-87	7796239	NT	Homo sapiens mRNA for KIAA0459 protein, partial cds
2372	12252	22143	1.07	4.0E-87	7796239	NT	Homo sapiens CGH49 protein (LOC31629), mRNA
3416	13336	23140	2.16	4.0E-87	5174574	NT	Homo sapiens CGI-60 protein (LOC31629), mRNA
5343	15264	25090	6.47	4.0E-87	000321	SWISSPROT	Homo sapiens myeloid/lymphoid or mixed-lineage leukemia (t(11q23)) (translocated to, 4
6680	15555	25696	4.36	4.0E-87	BE247284.1	EST_HUMAN	(MLT1) mRNA
8505	18378	28644	4.35	4.0E-87	M06076.1	NT	ETS-RELATED PROTEIN 71 (ETS TRANSLLOCATION VARIANT 2)
8904	18796	29091	2.13	4.0E-87	11417339	NT	TCBP-IE4051 Predicted pre-B cell acute lymphoblastic leukemia B-cell-HSC protein=TCBA Homo sapiens
9695	19246		14.71	4.0E-87	4885420	NT	Human von Willebrand factor pseudogene corresponding to exons 23 through 34
2749	12611	22602	2.99	2.0E-87	AL116335.1	EST_HUMAN	Homo sapiens similar to heat shock 70MD protein 93 (mortalin-2) (H. sapiens) (LOC63184), mRNA
3717	13629	23414	0.89	2.0E-87	AL116335.1	EST_HUMAN	Homo sapiens putative receptor P2X-like 1, orphan receptor (P2XOL1), mRNA
4628	14708	24492	1.17	2.0E-87	BF376311.1	EST_HUMAN	Homo sapiens high-mobility group (nonhistone chromosomal) protein 4 (HM/4), mRNA
							AU116035 HELM4T Homo sapiens cDNA clone HELM4T100307 5'
							OMD-TN0038-159690-552-008 TN0038 Homo sapiens cDNA

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### Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession	Top Hit Database Source	Top Hit Descriptor
4890	14760	24537	0.8	2.0E-87	BE175498.1	EST HUMAN	RC5-H10586-200300-031-034 H10580 Homo sapiens cDNA
5478	15893	25457	7.87	2.0E-87	BE734190.1	EST HUMAN	001590041PT NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3843780 5'
6473	16393	25458	7.87	2.0E-87	BE734190.1	EST HUMAN	001590041PT NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3843780 5'
6810	16725	25458	6.27	2.0E-87	BE587163.1	EST HUMAN	001341383PT NIH_MGC_53 Homo sapiens cDNA clone IMAGE:368348 5'
8256	18122	28275	1.51	2.0E-87	BE294322.1	EST HUMAN	001176032PT NIH_MGC_17 Homo sapiens cDNA clone IMAGE:35531511 5'
8407	18266	28430	32.21	2.0E-87	AB914028.1	EST HUMAN	X21407.11 Soares fetal liver spliced 1N1FLS Homo sapiens cDNA clone IMAGE:243399 5'
86026	16395	28564	28.31	2.0E-87	Y408128.1	EST HUMAN	X21407.11 Soares fetal liver spliced 1N1FLS Homo sapiens cDNA clone IMAGE:243399 5'
6882	16711	26660	3.81	2.0E-87	X53580.1	NT	Human cyclophilin gene for cyclophilin (EG 8.2.1.8)
7034	17458	27468	5.11	2.0E-87	BE331138.1	EST HUMAN	001276319PT NIH_MGC_39 Homo sapiens cDNA clone IMAGE:3810339 5'
1165	12845	233	2.33	1.0E-87	7705683.NT	EST HUMAN	Homo sapiens putative glycoprotein transfer protein (LOC55054). mRNA
1413	13161	21461	0.94	1.0E-87	AF108196.1	EST HUMAN	PM2-C10285-141690-001-g04 C10285 Homo sapiens cDNA
1413	13161	21862	0.94	1.0E-87	AF108197.1	EST HUMAN	PM2-C10285-141690-001-g04 C10285 Homo sapiens cDNA
3449	13563	23548	3.18	1.0E-87	Y000621.NT	NT	Human mRNA for 1-cell cyclophilin
3673	13587	23374	2.47	1.0E-87	4758822.NT	NT	Homo sapiens neuramin (N) (NRXND) mRNA
5057	14827	24889	1.04	1.0E-87	U06049.1	NT	Rattus norvegicus testis bud receptor protein TB 841 (TB 841) gene, complete cds
5774	16881	25785	3.39	1.0E-87	AF073371.1	NT	Homo sapiens growth factor receptor-bound protein 10 (GRB10) gene, exon 8
6774	16881	25789	3.39	1.0E-87	AF073371.1	NT	Homo sapiens growth factor receptor-bound protein 10 (GRB10) gene, exon 8
8370	16238	29388	1.8	1.0E-87	11431580.NT	EST HUMAN	Homo sapiens protein kinase C, beta 1 (PRKCB1). mRNA
6724	16904	29793	13.13	1.0E-87	AF214502.1	NT	Homo sapiens leached epithelium enriched protein (LUNO) gene, complete cds
7165	17042	27233	1.19	1.0E-87	AB202918.1	NT	Homo sapiens mRNA for alpha3-3-sialyltransferase S13 Gal VI, complete cds
7165	17042	27234	1.19	1.0E-87	AB202918.1	NT	Homo sapiens mRNA for alpha3-3-sialyltransferase S13 Gal VI, complete cds
7554	17095	27603	2.77	1.0E-87	BE518183.1	EST HUMAN	RC8-BN0276-050700-012-E02 BN0276 Homo sapiens cDNA
7554	17095	27623	2.77	1.0E-87	BE518183.1	EST HUMAN	RC8-BN0276-050700-012-E02 BN0276 Homo sapiens cDNA
8114	18003	28248	2.08	1.0E-87	5728607.NT	EST HUMAN	Homo sapiens leucine domain and RLD 2 (LEERC2). mRNA
8397	18244	28747	-1.78	1.0E-87	U00803.1	NT	Homo sapiens EGF-like element
9539	19751	28747	2.02	1.0E-87	7657632.NT	NT	Homo sapiens sulfotransferase-related protein (SULTX), mRNA
1090	11006	20847	7.39	9.0E-88	AF167465.1	NT	Homo sapiens double stranded RNA1398 protein kinase (PKR) gene, exon 12
1327	11234	21000	2	9.0E-88	AB037820.1	NT	Homo sapiens mRNA for KIAA1398 protein, partial cds
1327	11234	21001	2	9.0E-88	AB037820.1	NT	Homo sapiens mRNA for KIAA1398 protein, partial cds
3574	13468	23879	1.13	9.0E-88	AL165206.2	NT	Homo sapiens chromosome 21 segment H521009
4172	14022	23847	2.84	9.0E-88	X91829.1	NT	H. sapiens ECE-1 gene (exon 9)
4172	14022	23848	2.84	9.0E-88	X91829.1	NT	H. sapiens ECE-1 gene (exon 9)
4894	14512	24560	1.23	9.0E-88	AB26598.1	NT	Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 12 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)

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Table 4  
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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7216	17030	27284	3.69	6.0E-88	AF003528.1	NT	Homo sapiens X-linked mitochondrial ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
1787	11895		1.19	5.0E-83	7861887	NT	Homo sapiens KIAA0063 gene product (KIAA0063), mRNA
2002	12470	22306	3	5.0E-88	N80300.1	EST_HUMAN	K3710F Human fetal heart, Lambda ZAP Express Homo sapiens cDNA clone K3710 5' similar to ZINC FINGER PROTEIN HZF1
2070	12397	22866	0.92	5.0E-88	AF114488.1	NT	Homo sapiens intersecin short isoform (ITSN) mRNA, complete cds
2078	12305	22704	0.94	5.0E-88	AF114488.1	NT	Homo sapiens intersecin short isoform (ITSN) mRNA, complete cds
2078	12305	22705	0.94	5.0E-88	AF114488.1	NT	Homo sapiens intersecin short isoform (ITSN) mRNA, complete cds
3343	13283		2.31	5.0E-88	AI693217.1	EST_HUMAN	w88908.1 NCI Q647 Lu24 Homo sapiens cDNA clone IMAGE2330796 3' similar to contains AU repetitive element/contains element MER22 MER22 repetitive element ;
3491	13207	23212	0.91	5.0E-88	AF114488.1	NT	Homo sapiens intersecin short isoform (ITSN) mRNA, complete cds
4631	14518	24310	0.87	5.0E-88	AF114488.1	NT	Homo sapiens intersecin short isoform (ITSN) mRNA, complete cds
6059	16042	26185	2.64	5.0E-88	AI10392.1	EST_HUMAN	ym0810.11 Source: Infant brain T1018 Homo sapiens cDNA clone IMAGE47126 5'
6627	16507	26684	1.84	5.0E-88	AI163284.2	NT	Homo sapiens chromosome 21 segment H321 C084
1307	11214	21070	1.64	4.0E-88	BF091228.1	EST_HUMAN	PM1-TN0028-05000-00410 TN0028 Homo sapiens cDNA
1307	11214	21071	1.64	4.0E-88	BF091228.1	EST_HUMAN	PM1-TN0028-05000-00410 TN0028 Homo sapiens cDNA
8265	18150	26516	1.93	4.0E-88	1116685	NT	Homo sapiens transforming growth factor, beta-induced, 88D (TGFB1) mRNA
8261	18100	26402	2.64	4.0E-88	4502942	NT	Homo sapiens cell division cycle 10 (homologous to GDC10 of S. cerevisiae) (GDC10) mRNA
8760	18955	26893	2.1	4.0E-88	7861847	NT	Homo sapiens KIAA0153 gene product (KIAA0153), mRNA
8760	18955	26894	2.1	4.0E-88	7861847	NT	Homo sapiens KIAA0153 gene product (KIAA0153), mRNA
715	10347	20475	0.93	3.0E-88	11543600	NT	Homo sapiens hypothetical protein FLJ21634 (FLJ21634), mRNA
1770	11086		4.77	3.0E-88	4508020	NT	Homo sapiens androgen receptor protein 28 (ZNF28) mRNA
2018	12845	22847	4.31	3.0E-88	N55561.1	EST_HUMAN	z48412.31 Source: fetal liver spleen WFL53 Homo sapiens cDNA clone IMAGE256623 3'
4147	14047	23519	1.21	3.0E-88	4501912	NT	Homo sapiens a diaminoglycine and metalloproteinase domain 23 (ADAM23) mRNA
4147	14047	23520	1.21	3.0E-88	4501912	NT	Homo sapiens a diaminoglycine and metalloproteinase domain 23 (ADAM23) mRNA
4380	14276		3.17	3.0E-88	11429507	NT	Homo sapiens hypothetical protein FLJ22229 (FLJ22229), mRNA
5242	15100	24837	4.09	3.0E-88	11429507	NT	Homo sapiens vesicular containing protein (VCP), mRNA
5420	15349	25493	3.61	3.0E-88	9660889	NT	Homo sapiens polycystin-like protein 1, cell surface receptor (PKV1), mRNA
5468	15347	25480	3.39	3.0E-88	11420697	NT	Homo sapiens v-src avian leukemia viral oncogene homolog A (v-src related) (RALA), mRNA
6204	16004	26069	12.03	3.0E-88	AF270985.1	NT	Homo sapiens putative anion transporter 1 mRNA, complete cds
5452	15313	25479	0.66	3.0E-88	11436400	NT	Homo sapiens retinoldehydrogenase-binding protein 2 (RBBP2), mRNA
6620	16900	26688	8.52	3.0E-88	11421729	NT	Homo sapiens growth differentiation factor 5 (cartilage-derived morphogenetic protein-1) (GDF5), mRNA

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar Clustal BUST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6769	16648	26636	1.41	3.0E-88	AF03474.1	NT	Homo sapiens myoblast fusion factor, protein A and myoblast fusion factor, protein O mRNA, complete cds
7427	16640	26626	2.12	3.0E-88	U152032	NT	Homo sapiens v-ets avian erythroblastosis virus E26 oncogene related (ERG), mRNA
9288	18893	27476	4.76	3.0E-88	U147874	NT	Homo sapiens transcobalamin II, macrocytic anemia (TM2), mRNA
1020	10388	20780	1.42	2.0E-88	U705108	NT	Homo sapiens Caldesin, presenilin-binding protein, EF hand transcription factor (CSENI), mRNA
1407	11612	21372	0.83	2.0E-88	AF246218.1	NT	Homo sapiens SNARE protein kinase SNAX mRNA, complete cds
1716	11617	21486	4.19	2.0E-88	AF246219.1	NT	Homo sapiens SNARE protein kinase SNAX mRNA, complete cds
4328	14225	24007	1.03	2.0E-88	5931665	NT	Homo sapiens dyx11c1, axonal, light polypeptide 4 (DNAL1), mRNA
5504	15516	25597	4.98	1.0E-88	U138565.1	EST_HUMAN	U138565.1:seq-4:44-DU1.1:NT: CGAP, SUB3 Homo sapiens cDNA clone IMAGE:2718750.3
5504	15516	25598	4.98	1.0E-88	U138565.1	EST_HUMAN	U138565.1:seq-4:44-DU1.1:NT: CGAP, SUB3 Homo sapiens cDNA clone IMAGE:2718750.3
8004	15595	26333	17.59	1.0E-88	AB007877.1	NT	Homo sapiens KIA0447 mRNA, complete cds
8004	15595	26334	17.59	1.0E-88	AB007877.1	NT	Homo sapiens KIA0447 mRNA, complete cds
6263	16128	26282	4.06	1.0E-88	AA188961.1	EST_HUMAN	seaf1.1:1:NT:CGAP, GC81: Homo sapiens cDNA clone IMAGE:824732.3 similar to WP:80272.2
7624	17375	27564	2.86	1.0E-88	AL043314.2	EST_HUMAN	CD80591
8742	17861	28135	2.27	1.0E-88	AA691479.1	EST_HUMAN	CD87903.1:NT:CGAP, GC81: Homo sapiens cDNA clone IMAGE:434032.5
9302	19117	29447	2.08	1.0E-88	AL163246.2	NT	CD87903.1:NT:CGAP, GC81: Homo sapiens cDNA clone IMAGE:1612766.3 similar to gb:MF8342
8321	18186	22447	4.12	8.0E-86	U1142128	NT	HETEROCENEUS NUCLEAR RIBONUCLEOPROTEINS C1/C2 (HUMAN)
2705	12266	22456	1.41	8.0E-86	BE311957.1	EST_HUMAN	Homo sapiens telomerase 2 (TAGLN2), mRNA
426	10371	20194	1.35	7.0E-86	7667213	NT	001142408P1 NH, MOC, 14 Homo sapiens cDNA clone IMAGE:3500186.5
426	10371	20195	1.35	7.0E-86	7667213	NT	Homo sapiens telomerase 2 (TAGLN2), mRNA
4785	14970	24457	2.04	7.0E-86	4857340	EST_HUMAN	Homo sapiens telomerase 2 (TAGLN2), mRNA
4847	14728	24611	5.14	7.0E-86	AL045748.1	EST_HUMAN	Homo sapiens telomerase 2 (TAGLN2), mRNA
5334	15254	25076	1.35	7.0E-86	X95832.1	NT	U138565.1:seq-4:44-DU1.1:NT: CGAP, SUB3 Homo sapiens cDNA clone IMAGE:2718750.3
5334	15254	25077	1.35	7.0E-86	X95832.1	NT	Homo sapiens telomerase 2 (TAGLN2), mRNA
6428	16295	26450	1.78	7.0E-86	X62048.1	NT	Homo sapiens telomerase 2 (TAGLN2), mRNA
8006	17856	26997	1.42	7.0E-86	X62048.1	NT	Homo sapiens telomerase 2 (TAGLN2), mRNA
8006	17856	26998	1.42	7.0E-86	X62048.1	NT	Homo sapiens telomerase 2 (TAGLN2), mRNA
8012	17862	26107	1.17	7.0E-86	AB020890.1	NT	Homo sapiens telomerase 2 (TAGLN2), mRNA
8012	17862	26108	1.17	7.0E-86	AB020890.1	NT	Homo sapiens telomerase 2 (TAGLN2), mRNA
9026	18383	26768	3.07	7.0E-86	U19271.1	NT	Human acylphosphatase (ACOP2) gene, exon 2
10060	19024	26768	1.07	6.0E-86	5863144	NT	Homo sapiens inner membrane protein, mitochondrial (IMMT1), mRNA
2166	12053	21954	1.12	6.0E-86	4605124	NT	Homo sapiens serine/threonine-protein kinase PRK4 (PRK4), mRNA

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Probe SEQ ID NO.	Exon NO.	ORF SEQ ID NO.	Expression Signal	Mean Similar (Top) HT EST Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2383	12293	22154	1.97	6.0E-89	4507768	NT	Homo sapiens ubiquitin-conjugating enzyme E2L3 (UBE2L3) mRNA
2383	12293	22155	1.97	6.0E-89	4507768	NT	Homo sapiens ubiquitin-conjugating enzyme E2L3 (UBE2L3) mRNA
3490	13366	23201	0.84	6.0E-89	7091817	NT	Homo sapiens HSPC159 protein (HSPC159) mRNA
4537	14430	24211	3.5	6.0E-89	AB007886.2	NT	Homo sapiens mRNA for KIAA0405 protein, partial cds
4537	14430	24212	3.5	6.0E-89	AB007886.2	NT	Homo sapiens mRNA for KIAA0405 protein, partial cds
5007	14881	24646	2.77	5.0E-89	BE244332.1	EST_HUMAN	TCBP2E03833 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HGSC project=TCBA Homo sapiens cDNA clone TCBA-P0383
5007	14881	24647	2.77	5.0E-89	BE244332.1	EST_HUMAN	TCBP2E03833 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HGSC project=TCBA Homo sapiens cDNA clone TCBA-P0383
6477	16356	28593	1.33	4.0E-89	BE763749.1	EST_HUMAN	OV3-NT0022-080690-218-p03 NT0022 Homo sapiens cDNA
2647	12775	22863	1.81	3.0E-89	AF076181.1	EST_HUMAN	EST395290 MAGC sequences, MAGN Homo sapiens cDNA
6988	19241	29215	1.82	3.0E-89	AF076181.1	EST_HUMAN	AF076181 Homo sapiens cDNA clone AD885A01.5
121	10348	20776	1.48	2.0E-89	7708670	NT	Homo sapiens PXR2b protein (PXR2b) mRNA
121	10348	20776	1.48	2.0E-89	7708670	NT	Homo sapiens PXR2b protein (PXR2b) mRNA
402	10348	20776	0.91	2.0E-89	7708670	NT	Homo sapiens PXR2b protein (PXR2b) mRNA
402	10348	20776	0.91	2.0E-89	7708670	NT	Homo sapiens PXR2b protein (PXR2b) mRNA
519	10461	20272	0.83	2.0E-89	AB037783.1	NT	Homo sapiens mRNA for KIAA1942 protein, partial cds
2892	12780	22560	2.01	2.0E-89	A122095.1	EST_HUMAN	qg6d06.x1 Soares, NFL, T, GBC, S1 Homo sapiens cDNA clone IMAGE:1849022 3' similar to gb:U4131
4033	13655	23731	1.45	2.0E-89	AF069897.1	NT	GAMMA-GLUTAMYL TRANSPEPTIDASE 1 PRECURSOR (HUMAN) contains Alu repetitive element; partial cds
4031	13663	23740	6.18	2.0E-89	U58742.1	NT	Homo sapiens topoisomerase-related function protein (TRF4-2) mRNA, partial cds
4081	13663	23741	6.18	2.0E-89	U58742.1	NT	Homo sapiens HOG gene for tyrosine kinase (PTK), exons 10-11
4365	14292	24076	1.14	2.0E-89	AB007318.1	NT	Homo sapiens GGT gene, exon 5
5365	15288	29123	2.5	2.0E-89	AB007346.1	NT	Homo sapiens gene for LECT2, complete cds
5538	15455	29295	1.6	2.0E-89	U05886.1	NT	Human Nucleoside-sensitive factor mRNA, partial cds
6520	16379	29557	4.93	2.0E-89	U81004.1	NT	Human GT24 (GT24) mRNA, partial cds
6630	16510	29599	3.73	2.0E-89	11428901	NT	Homo sapiens solute carrier family 24 (sodium/potassium/calcium exchanger), member 2 (SLC24A2), mRNA
8600	18268	28951	2.83	2.0E-89	11434411	NT	Homo sapiens integrin, alpha 3 (antigen CD49C, alpha 3 subunit of VLA-3 receptor) (ITGA3), mRNA
8654	18698	28953	4.87	2.0E-89	11433679	NT	Homo sapiens cell adhesion molecule with homology to L1CAM (close homolog of L1) (CHL1), mRNA
8955	18702	28955	2.24	2.0E-89	U10862.1	NT	Human MAGP-7 antigen (MAGE7) pseudogene, complete cds



Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8860	18672	28580	6.12	1.0E-50	BF190052.1	EST_HUMAN	h81d09.x1 NCI CGAP JIG11 Homo sapiens cDNA clone IMAGE:313497 3' similar to TR:054778 054778 SOLUTE CARRIER FAMILY 22-LIKE 2 PROTEIN;
8860	18672	28661	6.12	1.0E-50	BF190052.1	EST_HUMAN	h81d09.x1 NCI CGAP JIG11 Homo sapiens cDNA clone IMAGE:313497 3' similar to TR:054778 054778 SOLUTE CARRIER FAMILY 22-LIKE 2 PROTEIN;
6789	16968	20859	1.16	9.0E-50	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21Q046
6789	16968	20860	1.16	9.0E-50	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21Q046
1047	10965	20805	1.62	8.0E-50	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21Q046
1048	10965	20805	2.93	8.0E-50	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21Q046
1308	12650	21072	5.28	8.0E-50	BE970561.1	EST_HUMAN	7a39008.x1 NCI CGAP JIG24 Homo sapiens cDNA clone IMAGE:3284583 3'
1308	12650	21073	5.28	8.0E-50	BE970561.1	EST_HUMAN	7a39008.x1 NCI CGAP JIG24 Homo sapiens cDNA clone IMAGE:3284583 3'
818	10749		2.65	7.0E-50	AF23591.1	NT	Homo sapiens calcium channel alpha 1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
6607	16785		1.91	7.0E-50	AA762977.1	EST_HUMAN	af63d08.at Soares, tasta, NHT Homo sapiens cDNA clone 1375503 3'
7183	17060	27260	1.88	7.0E-50	BE960526.2	EST_HUMAN	60165583.7R1 NIH, MSC, 69 Homo sapiens cDNA clone IMAGE:3955824 3'
7183	17060	27261	1.88	7.0E-50	BE960526.2	EST_HUMAN	60165583.7R1 NIH, MSC, 69 Homo sapiens cDNA clone IMAGE:3955824 3'
7833	17683	27827	1.98	7.0E-50	H98849.1	EST_HUMAN	yg6604.at Soares fetal liver spleen NMR S Homo sapiens cDNA clone IMAGE:212160 3' similar to SP-C1TC, HUMAN P11586 C-1-TETRAHYDROFOLATE SYNTHASE, CYTOPLASMIC;
7833	17683	27828	1.98	7.0E-50	H98849.1	EST_HUMAN	yg6604.at Soares fetal liver spleen NMR S Homo sapiens cDNA clone IMAGE:212160 3' similar to SP-C1TC, HUMAN P11586 C-1-TETRAHYDROFOLATE SYNTHASE, CYTOPLASMIC;
3028	12857	22748	1.14	6.0E-50	X91626.1	NT	H sapiens ECSE-1 gene (exon 6)
3028	12857	22750	1.14	6.0E-50	X91626.1	NT	H sapiens ECSE-1 gene (exon 6)
4134	14034	23805	7.33	6.0E-50	8622398	NT	Homo sapiens hypoxanthine protein PLJ10388 (PLJ10388), mRNA
4734	14034	23810	7.33	6.0E-50	8622398	NT	Homo sapiens hypoxanthine protein PLJ10388 (PLJ10388), mRNA
5941	16564	26646	3.54	6.0E-50	U7700.1	NT	Homo sapiens H5G5C1 mRNA, partial cds
5941	16564	26647	3.54	6.0E-50	U7700.1	NT	Homo sapiens H5G5C1 mRNA, partial cds
6845	16725	26818	3.28	6.0E-50	4504794	NT	Homo sapiens hsc70 mRNA, partial cds
6845	16725	26819	3.28	6.0E-50	4504794	NT	Homo sapiens hsc70 mRNA, partial cds
149	10123	11719	10.5	5.0E-50	AB039344.1	NT	Homo sapiens TGL6 gene, exon 1-10b
1175	11087	20631	1.55	5.0E-50	U60236.1	NT	Human gamma-aminobutyric acid transaminase mRNA, complete cds
2908	12382	22273	2.19	5.0E-50	AF111487.1	NT	Homo sapiens Intersectin long isoform (ITSN) mRNA, complete cds
4440	14334	24124	3.08	5.0E-50	4900354	NT	Homo sapiens pregnancy-zone protein (PZP) mRNA
4507	14400	24186	1.07	5.0E-50	AA705222.1	EST_HUMAN	483010.at Soares, fetal_liver_spleen, INFLS, S1 Homo sapiens cDNA clone IMAGE:461442 3'
4507	14400	24187	1.07	5.0E-50	AA705222.1	EST_HUMAN	483010.at Soares, fetal_liver_spleen, INFLS, S1 Homo sapiens cDNA clone IMAGE:461442 3'
4571	14463	24251	0.98	5.0E-50	AL135546.1	EST_HUMAN	DNF47/629/1616_11.782 (eponym: hme2) Homo sapiens cDNA clone DKF47629/1616 5'

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Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5433	16303	25406	2.52	5.0E-50	216411.1	NT	H.sapiens mRNA encoding phospholipase c
5523	16333	25406	2.13	5.0E-50	216411.1	NT	H.sapiens mRNA encoding phospholipase c
6283	16147	25502	2.26	5.0E-50	AF113708.1	NT	Human sapiens angiotensin 4 (ANG4) mRNA, partial cds
6293	16147	25503	2.26	5.0E-50	AF113708.1	NT	Human sapiens angiotensin 4 (ANG4) mRNA, partial cds
6464	16323	25490	7.63	5.0E-50	4557258	NT	Human sapiens angiotensin 4 (ANG4) mRNA
6525	16704	25500	4.86	5.0E-50	11346483	NT	Human sapiens hypoxanthine phosphoribosyl transferase 3 (H. sapiens) (LOC33214), mRNA
7581	17432	27846	1.24	5.0E-50	11419429	NT	Human sapiens ATPase, aminophospholipid transporter-like, Class I, type 8A, member 2 (ATP8A2), mRNA
7698	17918	28060	15.41	5.0E-50	11433721	NT	Human sapiens gene for AFB-5, complete cds
9744	16206	25406	2.16	5.0E-50	AB011350.1	NT	Human sapiens gene for AFB-5, complete cds
9766	16256	25406	2.37	5.0E-50	AF53395.1	EST_HUMAN	Human sapiens gene for AFB-5, complete cds
2560	10383	20083	1.85	4.0E-50	AF21920.1	NT	Human sapiens chromosome 21, unknown mRNA
2561	10383	20084	1.85	4.0E-50	AF21920.1	NT	Human sapiens chromosome 21, unknown mRNA
1070	10383	20530	2.64	4.0E-50	4565318	NT	Human sapiens myosin phosphatase, target subunit 1 (MYPT1), mRNA
1693	11665	21432	6.22	4.0E-50	350303.1	NT	H.sapiens gene encoding discoidin receptor tyrosine kinase, exon 1B
4567	14409	24365	4.07	4.0E-50	D31576.1	NT	Human sapiens mRNA for KIAA1244 protein, partial cds
4591	14577	24372	1.97	4.0E-50	D31576.1	NT	Human sapiens mRNA for KIAA1244 protein, partial cds
4713	14588	24385	1.8	4.0E-50	D31576.1	NT	Human sapiens mRNA for KIAA1244 protein, partial cds
8501	16703	26004	103.92	3.0E-50	BE53533.1	EST_HUMAN	Human sapiens mRNA for KIAA1244 protein, partial cds
207	10778	19995	4.28	2.0E-50	BE537913.1	EST_HUMAN	Human sapiens mRNA for KIAA1244 protein, partial cds
1156	11066	20713	3.66	2.0E-50	5031748	NT	Human sapiens high-mobility group (nonhistone chromosomal) protein 17 (HMGI7), mRNA
1160	11066	20914	3.66	2.0E-50	5031748	NT	Human sapiens high-mobility group (nonhistone chromosomal) protein 17 (HMGI7), mRNA
3771	13683	23465	2.81	2.0E-50	A138213.1	EST_HUMAN	Human sapiens high-mobility group (nonhistone chromosomal) protein 17 (HMGI7), mRNA
4588	14476	24384	1.13	2.0E-50	AB006827.1	NT	Human sapiens high-mobility group (nonhistone chromosomal) protein 17 (HMGI7), mRNA
4820	14703	24498	8.33	2.0E-50	5729655	NT	Human sapiens high-mobility group (nonhistone chromosomal) protein 17 (HMGI7), mRNA
5534	15451	26519	4.34	2.0E-50	AW672686.1	EST_HUMAN	Human sapiens high-mobility group (nonhistone chromosomal) protein 17 (HMGI7), mRNA
7638	17496	27708	2.9	2.0E-50	11427320	NT	Human sapiens high-mobility group (nonhistone chromosomal) protein 17 (HMGI7), mRNA
7698	17496	27709	2.9	2.0E-50	11427320	NT	Human sapiens high-mobility group (nonhistone chromosomal) protein 17 (HMGI7), mRNA
7722	16712	27766	1.95	2.0E-50	AU118995.1	EST_HUMAN	Human sapiens high-mobility group (nonhistone chromosomal) protein 17 (HMGI7), mRNA

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) HR BLAST E Value	Top HR Accession No.	Top HR Database Source	Top Hit Descriptor
7722	17672	27787	1.56	2.0E-90	AU118953.1	EST_HUMAN	AUT18985 HEMBA1 Homo sapiens cDNA clone HEMBA104795 5'
8705	17614	28159	46.27	2.0E-90	11024711	NT	Homo sapiens myosin, heavy polypeptide 4, skeletal muscle (MYH4), mRNA
370	10241	20060	3.39	1.0E-90	4502168	NT	Homo sapiens amyloid beta1 (A $\beta$ ) precursor protein (protease nexin-1, Alzheimer disease) (APP), mRNA
371	12639	20148	1.21	1.0E-90	AF231620.1	NT	Homo sapiens chromosome 21 unknown mRNA
371	12639	20148	1.04	1.0E-90	AF231620.1	NT	Homo sapiens chromosome 21 unknown mRNA
680	10613	20439	2.03	1.0E-90	AI237586.1	NT	Homo sapiens mRNA for T-box transcription factor (TBX20 gene), partial
680	10613	20439	2.03	1.0E-90	AI237586.1	NT	Homo sapiens mRNA for T-box transcription factor (TBX20 gene), partial
713	10643	20472	7.71	1.0E-90	AF264750.1	NT	Homo sapiens ALR-like protein mRNA, partial cds
713	10643	20472	7.71	1.0E-90	AF264750.1	NT	Homo sapiens ALR-like protein mRNA, partial cds
1094	11010	20473	7.71	1.0E-90	AF264750.1	NT	Homo sapiens ALR-like protein mRNA, partial cds
1094	11010	20473	7.71	1.0E-90	AF264750.1	NT	Homo sapiens ALR-like protein mRNA, partial cds
1284	11162	21044	3.47	1.0E-90	AF091541	NT	Homo sapiens Kruppel-like factor 7 (ubiquitous) (KLF7), mRNA
1284	11162	21044	3.47	1.0E-90	AF091541	NT	Homo sapiens protein phosphatase 2A, BR gamma subunit gene, exon 3
1344	11946	21045	3.47	1.0E-90	AF091541	NT	Homo sapiens protein phosphatase 2A, BR gamma subunit gene, exon 3
1644	11946	21045	3.47	1.0E-90	BE7884.1	EST_HUMAN	60115955P2 NIH MGC-83 Homo sapiens cDNA clone IMAGE381118 5'
1860	11763	21681	4.96	1.0E-90	11420514	NT	Homo sapiens similar to SALL1 (all (Drosophila)-like) (LOC61667), mRNA
2823	12752	22545	8.41	1.0E-90	6005720	NT	Homo sapiens chromosome 3 open reading frame 2 (GORE2), mRNA
3771	13965	23473	1.18	1.0E-90	AJ520710.1	NT	Homo sapiens mRNA for KIAA0503 protein, partial cds
3771	13965	23474	1.18	1.0E-90	AJ520710.1	NT	Homo sapiens mRNA for KIAA0503 protein, partial cds
4328	14223	24005	1	1.0E-90	AF167540.1	NT	Homo sapiens soluble interluciferin 1 receptor accessory protein (L1-TRAP) gene, exon 8, alternative exons 9 and complete cds, alternatively spliced
5461	15407	25464	2.2	1.0E-90	AJ014533.1	NT	Homo sapiens mRNA for KIAA0533 protein, partial cds
6521	16390	26559	2.85	1.0E-90	11426768	NT	Homo sapiens solute carrier family 1 (high affinity aspartate/glutamate transporter), member 6 (SLC1A6), mRNA
7121	16666	27189	3.76	1.0E-90	11422095	NT	Homo sapiens LysEfin1 Antihistaminic guanine nucleotide-exchange protein 2 (GIC2), mRNA
7356	17224	27189	1.22	1.0E-90	AF16384.1	NT	Homo sapiens SCNA isoform (SCNA) gene, complete cds, alternatively spliced
7371	17240	27444	1.72	1.0E-90	11421109	NT	Homo sapiens CGI-16 protein (LOC51009), mRNA
7371	17240	27445	1.72	1.0E-90	11421109	NT	Homo sapiens CGI-16 protein (LOC51009), mRNA
8732	16268	25225	1.86	1.0E-90	AJ002056.1	NT	Homo sapiens CGI-15 protein (LOC51009), mRNA
9732	16268	25225	1.86	1.0E-90	AJ002056.1	NT	Homo sapiens CGI-15 protein (LOC51009), mRNA
4101	14001	23780	5.48	6.0E-91	D12234.1	EST_HUMAN	HUM0005367 Liver HepG2 cell line. Homo sapiens cDNA clone c381 3'
1428	11353	21166	7.05	7.0E-91	AF046376.1	NT	Rattus norvegicus brain specific cortactin-binding protein CBP90 mRNA, partial cds
6935	16714	23607	2.05	1.0E-90	11416224	NT	Homo sapiens maltrin, ring finger protein, 1 (MKRN1), mRNA
3426	13346	23151	1.47	5.0E-91	AA102764.1	EST_HUMAN	250004.1 Soares, fetal liver spleen -1NF5. S1 Homo sapiens cDNA clone IMAGE-448015 3'
4415	14305	24062	1.05	5.0E-91	AJ143559.1	EST_HUMAN	AU143559 Y9AA1 Homo sapiens cDNA clone Y9AA100267 5'

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top: Hit Descriptor
4415	14309	24062	1.05	5.0E-91	AU143539.1	EST HUMAN	AU143539 Y60A1 Homo sapiens cDNA clone Y60A1.002067
4703	14389	24379	0.82	5.0E-91	7110034	NT	Homo sapiens chromosome 22 open reading frame 5 (G22ORF5), mRNA
4703	14389	24380	0.82	5.0E-91	7110034	NT	Homo sapiens chromosome 22 open reading frame 5 (G22ORF5), mRNA
7057	16954	27167	1.34	5.0E-91	AV194878.1	EST HUMAN	AV194878 GLC Homo sapiens cDNA clone GLC8YF08 3'
7057	16954	27169	1.34	5.0E-91	AV194878.1	EST HUMAN	AV194878 GLC Homo sapiens cDNA clone GLC8YF08 3'
3105	13091	22695	1.3	4.0E-91	AF150776.1	NT	Homo sapiens lysophosphatidic acid acyltransferase-delta (LPAAT-delta) mRNA, complete cds
3105	13091	22696	1.3	4.0E-91	AF150776.1	NT	Homo sapiens lysophosphatidic acid acyltransferase-delta (LPAAT-delta) mRNA, complete cds
8301	18180	28427	3.13	4.0E-91	AL103284.2	NT	Homo sapiens chromosome 21 segment HS21C084
8301	18180	28427	3.13	4.0E-91	AL103284.2	NT	Homo sapiens chromosome 21 segment HS21C084
9239	18954	26314	1.87	4.0E-91	M77994.1	EST HUMAN	EST01579 Hippocampus, Striatum (cat. #932203) Homo sapiens cDNA clone HHC0560 similar to
9239	18954	26314	1.87	4.0E-91	M77994.1	EST HUMAN	EST01579 Hippocampus, Striatum (cat. #932203) Homo sapiens cDNA clone HHC0560 similar to
1801	11506	21360	1.87	4.0E-91	M77994.1	EST HUMAN	EST01579 Hippocampus, Striatum (cat. #932203) Homo sapiens cDNA clone HHC0560 similar to
1801	11506	21360	1.87	4.0E-91	M77994.1	EST HUMAN	EST01579 Hippocampus, Striatum (cat. #932203) Homo sapiens cDNA clone HHC0560 similar to
1801	11506	21367	5.12	3.0E-91	11430168	NT	Homo sapiens solute carrier family 4, anion exchanger, member 3 (SLC4A3), mRNA
1801	11506	21367	5.12	3.0E-91	11430168	NT	Homo sapiens solute carrier family 4, anion exchanger, member 3 (SLC4A3), mRNA
2824	12402	22382	0.99	3.0E-91	AF169553.1	NT	Homo sapiens beta-ureidopropionase (BUP1) gene, exon 6
2824	12402	22382	0.99	3.0E-91	AF169553.1	NT	Homo sapiens beta-ureidopropionase (BUP1) gene, exon 6
2824	12402	22383	0.99	3.0E-91	AF169553.1	NT	Homo sapiens beta-ureidopropionase (BUP1) gene, exon 6
3267	13219	25020	1.77	3.0E-91	AL103283.2	NT	Homo sapiens chromosome 21 segment HS21C083
3416	13333	25196	2.86	3.0E-91	AB035104.1	NT	Homo sapiens mRNA for KIAA1279 protein, partial cds
3416	13333	25197	2.86	3.0E-91	AB035104.1	NT	Homo sapiens mRNA for KIAA1279 protein, partial cds
3416	13333	25197	2.86	3.0E-91	AB035104.1	NT	Homo sapiens mRNA for KIAA1279 protein, partial cds
3720	13352	25418	0.83	3.0E-91	AF084590.1	NT	Homo sapiens cyclin D binding MYD-like protein, full length
4487	14381	25168	4.02	3.0E-91	M200938.1	NT	Human KU (p70p80) subunit mRNA, complete cds
4805	14785	25590	1.2	3.0E-91	AL103285.2	NT	Homo sapiens chromosome 21 segment HS21C085
4903	14785	25591	1.2	3.0E-91	AL103285.2	NT	Homo sapiens chromosome 21 segment HS21C085
5488	15407	25470	1.45	3.0E-91	11454864	NT	Homo sapiens epididymal secretory protein (19.5KD) (HE1), mRNA
5807	15712	25670	2.39	3.0E-91	4002740	NT	Homo sapiens cyclin-dependent kinase 6 (CDK6) mRNA
5807	15712	25670	2.39	3.0E-91	4002740	NT	Homo sapiens cyclin-dependent kinase 6 (CDK6) mRNA
5967	15972	25696	4.11	3.0E-91	11467911	NT	Homo sapiens gamma-aminobutyric acid (GABA) B receptor, 1 (GABBR1), transcript variant 2, mRNA
5967	15972	25697	4.11	3.0E-91	11467911	NT	Homo sapiens gamma-aminobutyric acid (GABA) B receptor, 1 (GABBR1), transcript variant 2, mRNA
5902	16391	26536	4.4	3.0E-91	U86959.1	NT	Human L-type calcium channel beta-1 subunit (CACNL1B1) gene, exons 10 and 11
5902	16391	26539	4.4	3.0E-91	U86959.1	NT	Human L-type calcium channel beta-1 subunit (CACNL1B1) gene, exons 10 and 11
7009	16970	27163	3.31	3.0E-91	D19494.1	NT	Human mRNA for very low density lipoprotein receptor, complete cds
7009	16970	27163	3.31	3.0E-91	D19494.1	NT	Human mRNA for very low density lipoprotein receptor, complete cds
9480	18104	25286	1.45	3.0E-91	AF240786.1	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds

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Table 4

### Single Exon Probes Expressed in Heart

[illegible]

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2190	12027	21023	1.67	7.0E-02	5031570	NT	Human sapiens ARP2 (actin-related protein 2, years) homolog (ACTR2), mRNA
2190	12027	21924	1.67	7.0E-02	5031570	NT	Human sapiens ARP2 (actin-related protein 2, years) homolog (ACTR2), mRNA
2517	12031	22283	2.32	7.0E-02	AF167705.1	NT	Human sapiens cysteine-rich repeat-containing protein S62 precursor, mRNA, complete cds
2593	12058	22446	5.01	7.0E-02	6005738	NT	Human sapiens NRAS-related gene (D1S165E), mRNA
2724	12096	22481	1.04	7.0E-02	AB031007.1	NT	Human sapiens DNA, MHC class I region, 7.1 ancestral haplotype
3321	16098	23023	0.92	7.0E-02	4507500	NT	Human sapiens T-cell lymphoma invasion and metastasis 1 (T1AM1) mRNA
3301	16068	23024	0.92	7.0E-02	4507500	NT	Human sapiens T-cell lymphoma invasion and metastasis 1 (T1AM1) mRNA
4464	14378	24105	1.01	7.0E-02	S71824.1	NT	N-CAM=145 kDa neural cell adhesion molecule [human, small cell lung cancer cell line OS2-R, mRNA, 2950 nt]
4464	14378	24106	1.81	7.0E-02	S71824.1	NT	N-CAM=145 kDa neural cell adhesion molecule [human, small cell lung cancer cell line OS2-R, mRNA, 2950 nt]
5110	14778	24752	1.45	7.0E-02	4509118	NT	Human sapiens prosaparin-related homeobox 1 (PROX1) mRNA
5216	15142	24536	4.97	7.0E-02	U446206.1	EST_HUMAN	ZYG531.21 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:365016 5'
1699	11473	24536	0.83	6.0E-02	BE30082.1	EST_HUMAN	5012837.21 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:365016 5'
2738	12090	22494	2.45	3.0E-02	BE09714.1	EST_HUMAN	501601.23 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:390289 5'
5593	15098	25575	3.74	3.0E-02	AA376335.1	EST_HUMAN	EST191020.2 Syngeneic sarcoma Homo sapiens cDNA 5' and similar to similar to ribosome protein S13
8146	18334	26281	6.7	3.0E-02	X15804.1	NT	Human mRNA for alpha-actinin
8146	18334	26282	6.7	3.0E-02	X15804.1	NT	Human mRNA for alpha-actinin
225	10170	18683	1.93	2.0E-02	4601638	NT	Human sapiens actin A receptor, type IB (ACTG2B) mRNA
172	10143	18686	2.93	2.0E-02	11422946	NT	Human sapiens hypothetical protein U46203.2 (U46203.2), mRNA
720	10143	18689	2.93	2.0E-02	11422946	NT	Human sapiens hypothetical protein U46203.2 (U46203.2), mRNA
732	10684	20497	1.38	2.0E-02	BE29510.1	EST_HUMAN	501118337.1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3025304 5'
732	10684	20498	1.38	2.0E-02	BE29510.1	EST_HUMAN	501118337.1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3025304 5'
1869	11686		2.74	2.0E-02	S76953.1	NT	myosin-related [human, Genbank, 2416 nt]
1894	11789	21087	1.55	2.0E-02	AB18119.1	EST_HUMAN	wk27407.x1 NCI_CGAP_Bm26 Homo sapiens cDNA clone IMAGE:2413640 3' similar to TRK12844
1894	11789	21088	1.55	2.0E-02	AB18119.1	EST_HUMAN	wk27407.x1 NCI_CGAP_Bm26 Homo sapiens cDNA clone IMAGE:2413640 3' similar to TRK12844
2002	11895	21787	4.71	2.0E-02	4608830	NT	Q12944 BREAKPOINT CLUSTER REGION PROTEIN;
2623	12481	22281	37.64	2.0E-02	6912457	NT	Q12944 BREAKPOINT CLUSTER REGION PROTEIN;
3502	13470	23205	1.02	2.0E-02	AF231916.1	NT	Human sapiens cdc42actin binding protein 1 (CDC42BP1), mRNA
3562	13470	23205	1.02	2.0E-02	AF231916.1	NT	Human sapiens chromosome 21 unknown mRNA
3531	13546	23332	4.99	2.0E-02	5903180	NT	Human sapiens stress-induced-phosphoprotein 1 (Hsp70/Hsp90-organizing protein) (STIP1), mRNA

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Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) HH BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4191	14091	23866	1.02	2.0E-92	M10976.1	NT	Human endogenous retroviral DNA (4.1), complete retroviral segment
4918	14834	24023	0.79	2.0E-92	AF136533.1	NT	Human sapiens ble cell export pump (BSEP) mRNA, complete cds
4922	14801		2.83	2.0E-92	AL040437.1	EST_HUMAN	DNKZP434C0414_1 434 (synonym: hies3) Homo sapiens cDNA clone DNKZP434C0414 5'
6089	15894	28017	2.49	2.0E-92	AB028891.1	NT	Human sapiens mRNA for KIAA1068 protein, partial cds
6420	16273		2.26	2.0E-92	U67780.1	NT	Human NPY Y1-receptor pseudogene mRNA, complete cds
7141	17018	27211	1.37	2.0E-92	AW340174.1	EST_HUMAN	hcd0202.21 Soares_NEL_21.GSQC.S1 Homo sapiens cDNA clone IMAGE:2908371 3' similar to TR-022711
8142	18030	29276	5.91	2.0E-92	11434800	NT	O02711 PRO-POL-DUTPASE POLYPROTEIN ;
9380	19172	25274	2.55	2.0E-92	AB025016.1	NT	Human sapiens thyroid stimulating hormone receptor (TSHR), mRNA
9639	12491	22381	26.85	2.0E-92	6972457	NT	Human sapiens calcineurin binding protein 1 (KIA0330), mRNA
1807	11704	21582	1.11	1.0E-92	R76078.1	EST_HUMAN	X80065.1 Soares placenta N23AP Homo sapiens cDNA clone IMAGE:145574 5'
1807	11704	21583	1.11	1.0E-92	R76078.1	EST_HUMAN	X80065.1 Soares placenta N23AP Homo sapiens cDNA clone IMAGE:145574 5'
2028	11918	21610	34.72	1.0E-92	4506698	NT	Homo sapiens ribosomal protein, large, P1 (RPLP1) mRNA
7286	17162	27360	4.04	1.0E-92	A30356.1	EST_HUMAN	U01003.21 NCI CGAP CLL1 Homo sapiens cDNA clone IMAGE:2107467 3' similar to SW-PTNF_HUMAN Q11623A PROTEIN-TYROSINE PHOSPHATASE D1, contains A11 repetitive element, contains element MER17 repetitive element;
7286	17162	27361	4.04	1.0E-92	A30356.1	EST_HUMAN	Q11623A PROTEIN-TYROSINE PHOSPHATASE D1, contains A11 repetitive element, contains element MER17 repetitive element;
1083	11976	21766	3.14	9.0E-93	AU121581.1	EST_HUMAN	AUT12081 MAMMA1 Homo sapiens cDNA clone MAMMA1000738 5'
1086	11890		9.21	9.0E-93	A4316725.1	EST_HUMAN	EST1894114 H2C cell line (metastasis to liver in mouse) Homo sapiens cDNA 5' end similar to ribosomal protein L29
2010	12478		1.46	9.0E-93	AF223991.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
3363	13477	23267	0.96	9.0E-93	BE368571.1	EST_HUMAN	G01281067.F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3603832 5'
8911	18179		9.81	9.0E-93	11418828	NT	Homo sapiens ribosomal protein L10a (RPL10A), mRNA
5976	15979	26003	2.49	8.0E-93	BF035964.1	EST_HUMAN	G01460321.F1 NIH_MGC_06 Homo sapiens cDNA clone IMAGE:3995906 5'
246	10212	20028	6.24	7.0E-93	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
1359	11265	21721	1.26	5.0E-93	AB014511.1	NT	Homo sapiens mRNA for KIAA0611 protein, partial cds
1385	11260	21145	5.39	5.0E-93	A074184.1	EST_HUMAN	wc03b08.x1 NCI CGAP P28 Homo sapiens cDNA clone IMAGE:2314670 3'
1350	11250	21146	5.39	5.0E-93	A074184.1	EST_HUMAN	wc03b08.x1 NCI CGAP P28 Homo sapiens cDNA clone IMAGE:2314670 3'
1450	11364		0.95	5.0E-93	AL163201.2	NT	Homo sapiens chromosome 21 segment HS21C001
3195	13120	22625	2.42	5.0E-93	X04201.1	NT	Human skeletal muscle 1.3 kb mRNA for tropomyosin

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9540	10398	29577	3.07	5.0E-53	AF067139.1	NT	Homo sapiens protein phosphatase-1 regulatory subunit 7 (PPP1R7) gene, exon 11, complete cds and alternatively spliced product
7649	17400	27813	2.07	5.0E-53	AF274963.1	NT	Homo sapiens secretory pathway component Sac3B-1 mRNA, alternatively spliced, complete cds
7644	17404	27715	1.31	5.0E-53	5032159	NT	Homo sapiens TAR (HIV) RNA-binding protein 1 (TARBP1) mRNA
8200	18085	28330	3.01	5.0E-53	11439659	NT	Homo sapiens nucleobindin 2 (NUCB2), mRNA
8487	19423	25173	1.84	5.0E-53	11417877	NT	Homo sapiens gamma-glutamyltransferase 1 (GGT1), mRNA
82	10069		4.72	4.0E-53	AA456533.1	EST_HUMAN	255049.s1 Soares, Isalis, NIH Homo sapiens cDNA clone IMAGE:795089 3' similar to SW624A_RAT
437	10381	20204	1.76	4.0E-53	4557879	NT	Homo sapiens interferon gamma receptor 1 (IFNGR1) mRNA
437	10381	20205	1.76	4.0E-53	4557879	NT	Homo sapiens interferon gamma receptor 1 (IFNGR1) mRNA
755	10685	20522	1.33	4.0E-53	7957454	NT	Homo sapiens pascillo (zabrafish) homolog 1, containing BRC1 domain (PES1), mRNA
755	10685	20523	1.33	4.0E-53	7957454	NT	Homo sapiens pascillo (zabrafish) homolog 1, containing BRC1 domain (PES1), mRNA
1180	11078	20523	2.08	4.0E-53	8922498	NT	Homo sapiens hypodermal protein FL20731 (FLJ20731), mRNA
1834	11939	21112	5.06	4.0E-53	AF41677.1	NT	Homo sapiens diaphanin (DMD) gene, deletion breakpoints 1-3 in exon 5
2340	12229	22126	0.84	4.0E-53	AL163301.2	NT	Homo sapiens chromosome 21 segment HS21C101
2584	12458	22338	2.18	4.0E-53	7656072	NT	Homo sapiens TNF-inducible protein GIG13.1 (GIG13.1), mRNA
3082	13869	23947	1.44	4.0E-53	4504659	NT	Homo sapiens interleukin 18 receptor 1 (IL18R1) mRNA
5495	15398	25445	4.81	4.0E-53	T46884.1	EST_HUMAN	Y641c12.1 Stratagene liver (H63724) Homo sapiens cDNA clone IMAGE:78688 5' similar to SP:AA4397 AA4397 SERUM RESPONSE ELEMENT-BINDING PROTEIN SRE-23P - HUMAN.
8476	18248	29813	19.24	4.0E-53	AV92051.1	EST_HUMAN	AV92051 GKC Homo sapiens cDNA clone GKCRR07.5
3901	13516	23502	6.90	3.0E-53	BF006500.1	EST_HUMAN	60224654F1 NIH_MGC_62 Homo sapiens cDNA clone IMAGE:4932036 5'
3001	13516	23503	5.99	3.0E-53	BF006500.1	EST_HUMAN	60224654F1 NIH_MGC_62 Homo sapiens cDNA clone IMAGE:4932036 5'
4142	14442		2.7	3.0E-53	AF226896.1	NT	Homo sapiens tetrahin mRNA, complete cds
5535	15452	25920	1.86	3.0E-53	AF63983.1	EST_HUMAN	h25935.x1 NCI_GCAP_Brc05 Homo sapiens cDNA clone IMAGE:216076 3'
5535	15452	25921	1.86	3.0E-53	AF63983.1	EST_HUMAN	h25935.x1 NCI_GCAP_Brc05 Homo sapiens cDNA clone IMAGE:216076 3'
5562	15857	25919	1.32	3.0E-53	11426182	NT	Homo sapiens GON6 (general control of amino-acid synthesis, yeast, homolog) like 2 (GON6L2), mRNA
8178	18066	29814	4.16	3.0E-53	AB24429.1	EST_HUMAN	w402405.x1 NCI_GCAP_G08 Homo sapiens cDNA clone IMAGE:2304489 3'
183	10156	19870	8.31	2.0E-53	AB116910.1	NT	Glicoxalase sialopos mRNA for ribosomal protein S4X, complete cds
183	10156	19871	8.31	2.0E-53	AB116910.1	NT	Glicoxalase sialopos mRNA for ribosomal protein S4X, complete cds
320	10282	20100	6.69	2.0E-53	AL163285.2	NT	Homo sapiens chromosome 21 segment HS21C085
321	10282	20100	7.68	2.0E-53	AL163285.2	NT	Homo sapiens chromosome 21 segment HS21C085



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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1598	11903	21063	1.48	2.0E-93	AF226966.1	NT	Homo sapiens tensin mRNA, complete cds
2093	11973	21068	1.02	2.0E-93	U0703.1	NT	Human Cdk-associated RS cyclophilin CARS-Cyp mRNA, complete cds
2436	12113	22210	0.89	2.0E-93	HE26592.1	EST_HUMAN	601117689F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3358220 5'
6098	14956	24732	1.02	2.0E-93	BE35201.1	EST_HUMAN	601117689F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3357243 5'
6325	16245	25046	4.59	2.0E-93	AW064385.1	EST_HUMAN	ES1370488 IMAGE resequencing, MAGH Homo sapiens cDNA
6462	16382	25442	1.52	2.0E-93	11430039	NT	Homo sapiens hypothetical protein LOC51318, mRNA
6014	16919		1.32	2.0E-93	AW502002.1	EST_HUMAN	U1HF-BNO-alka-gp-3UJ1T NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3076329 5'
8866	16476	25993	2.87	2.0E-93	AL132025.1	EST_HUMAN	q7b610.27 Scores: fetal_lung_NHL19W Homo sapiens cDNA clone IMAGE:1628116 3'
9390	19046		1.32	2.0E-93	AA120735.1	EST_HUMAN	Z25c10.57 Scores: fragment, uterus_NHRPU Homo sapiens cDNA clone IMAGE:503346 3'
9405	19065		1.31	2.0E-93	L41925.1	NT	Homo sapiens CYP17 gene, 5' and
9724	19283		2.76	2.0E-93	BF035327.1	EST_HUMAN	601468531F1 NIH_MGC_06 Homo sapiens cDNA clone IMAGE:3882066 5'
96	10091	19897	1.64	1.0E-93	AF238997.1	NT	Homo sapiens CIR1 pseudogene
96	10091	19898	1.64	1.0E-93	AF238997.1	NT	Homo sapiens CIR1 pseudogene
507	10448	20382	2.56	1.0E-93	7657016	NT	Homo sapiens hypothetical protein (DJ328E19, C1.1), mRNA
595	10833	20330	3.76	1.0E-93	A146765.1	EST_HUMAN	064908.41 NCL CGAP_C1.1 Homo sapiens cDNA clone IMAGE:1672603 3' similar to TRQ22394_Q02394
864	10761	20331	3.32	1.0E-93	D87678.1	EST_HUMAN	ZINC FINGER PROTEIN, 1
1217	11128	20374	6.41	1.0E-93	8923270	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
1217	11128	20375	6.41	1.0E-93	8923270	NT	Homo sapiens hypothetical protein FL20281 (FLJ20281), mRNA
1321	11228	21063	1.56	1.0E-93	AB046783.1	NT	Homo sapiens mRNA for TADA1553 protein, partial cds
1323	11230	21065	1.60	1.0E-93	AF167706.1	NT	Homo sapiens cysteine-rich repeat-containing protein S22 precursor, mRNA, complete cds
2290	12172	22270	1.01	1.0E-93	AF231081.1	NT	Homo sapiens long chain polynaturated fatty acid elongation enzyme (HELO-1) mRNA, complete cds
2415	12392	22190	4.16	1.0E-93	AF059065.1	NT	Homo sapiens MHC class 1 region
2450	12336		1.09	1.0E-93	AL137200.1	EST_HUMAN	Novel human gene mapping to chromosome 1
2762	11191	21030	2.69	1.0E-93	BE297369.1	EST_HUMAN	601170689F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3832666 5'
2903	12930	22927	2.69	1.0E-93	D87675.1	NT	601170689F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3832666 5'
4311	14228	24010	1.44	1.0E-93	AL163284.2	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
5417	15339	25391	1.62	1.0E-93	U70509.1	NT	Homo sapiens chromosome 21 segment HS21C084
5417	15339	25392	1.62	1.0E-93	U70509.1	NT	Homo sapiens glucocorticoid receptor (GRL) genes, intron D, exon E, and intron E
5907	15522	25904	9.16	1.0E-93	4587792	NT	Homo sapiens neurofilament 1 (neurofilament, von Rockinghaus disease, Watson disease) (NFI) mRNA
6097	16051	26197	2.09	1.0E-93	11431550	NT	Homo sapiens protein kinase C, beta 1 (PRKCB1), mRNA

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6299	16163	26320	4.09	1.0E-03	D42072.1	NT	Human mRNA for NFI1 isoform-clone11, complete cds
6607	16666	26876	2.04	1.0E-03	AB037832.1	NT	Human sapiens mRNA for KIAA1411 protein, partial cds
6971	16948	27039	1.16	1.0E-03	Y10183.1	NT	Human sapiens mRNA for MEAD protein
7034	16901	27093	1.56	1.0E-03	AF182032.1	NT	Human sapiens protein kinase inhibitor gamma (PKIG) mRNA, complete cds
7037	16900	26940	1.87	1.0E-03	AB040918.1	NT	Human sapiens mRNA for KIAA1482 protein, partial cds
7440	16403	26643	1.22	1.0E-03	AF081395.1	NT	Human sapiens T10 isoform mRNA, complete cds
7529	17360	27863	4.54	1.0E-03	K13474.1	NT	Human PrrA4 gene for Alzheimer's disease A4 amyloid protein precursor (exon 9)
7529	17360	27863	4.54	1.0E-03	K13474.1	NT	Human PrrA4 gene for Alzheimer's disease A4 amyloid protein precursor (exon 9)
9051	19664	26132	5.62	1.0E-03	A126829.1	EST_HUMAN	Human PrrA4 gene for Alzheimer's disease A4 amyloid protein precursor (exon 9)
9716	16257		2.33	1.0E-03		EST_HUMAN	CE13742; Human sapiens glutathione S-transferase beta 2 (GSTT2), mRNA
8026	17976		1.22	5.0E-04	AL03206.2	NT	Human sapiens chromosome 21 segment HS2(CO9)
3880	13791	23579	1.74	5.0E-04	AF42482.1	NT	Human sapiens transcription enhancer factor-5 mRNA, complete cds
9530	16331		1.67	5.0E-04	U147839.1	NT	Human sapiens mitogen-activated protein kinase 12 (MAPK12), mRNA
6296	16217	26019	3.05	5.0E-04	AB014612.1	NT	Human sapiens mRNA for KIAA0912 protein, partial cds
6296	16217	26020	3.05	5.0E-04	AB014612.1	NT	Human sapiens mRNA for KIAA0912 protein, partial cds
5980	15568	26669	1.72	5.0E-04	AA722434.1	EST_HUMAN	2957003.at Scores: fetal liver N39H19W Homo sapiens cDNA clone IMAGE:40564 3'
6183	16069	26218	1.83	5.0E-04	AD15900.1	EST_HUMAN	085003.at Scores: fetal liver N39H19W Homo sapiens cDNA clone IMAGE:162369 3'
6301	16736	24911	4.88	5.0E-04	H83098.1	EST_HUMAN	YAB804.at Scores: fetal liver spleen 1NRLS Homo sapiens cDNA clone IMAGE:116239 3'
6001	19378		1.27	5.0E-04	D29217.2	NT	Human sapiens mRNA for KIAA0027 protein, partial cds
9807	19384		1.26	5.0E-04	9508724	NT	Human sapiens fibronectin and polydactylon specific factor 1, 190KD subunit (QPSF1), mRNA
1766	11697		4.35	4.0E-04	L03084.1	NT	Human sapiens protein phosphatase 1, regulatory subunit 10 (PPP1R10) mRNA
2621	12480	22370	0.66	4.0E-04	4506008	NT	Human sapiens protein phosphatase 1, regulatory subunit 10 (PPP1R10) mRNA
4918	14506	24295	3.02	4.0E-04	A591912.1	EST_HUMAN	Protein tyrosine phosphatase
6392	15798	25921	1.84	4.0E-04	11440670	NT	Human sapiens adult carrier family 22 (organic cation transporter), member 1-like (SLC22A1L), mRNA
5982	15796	25922	1.84	4.0E-04	11440670	NT	Human sapiens adult carrier family 22 (organic cation transporter), member 1-like (SLC22A1L), mRNA
8746	17666	26142	1.72	3.0E-04	11545762	NT	Human sapiens hypothetical protein FLJ12435 (FLJ12435), mRNA
593	10331	20336	1.17	3.0E-04	AB022785.1	NT	Human sapiens ASH2L gene, complete cds, similar to Drosophila ash2 gene
7031	10357	20452	1.17	3.0E-04	4602506	NT	Human sapiens complement component 5 (C5) mRNA
1705	11607	21477	1.03	3.0E-04	AF167708.1	NT	Human sapiens cytochrome b5 repeat-containing protein S62 precursor, mRNA, complete cds
1705	11607	21478	1.03	3.0E-04	AF167708.1	NT	Human sapiens cytochrome b5 repeat-containing protein S62 precursor, mRNA, complete cds

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) HR Database Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1735	11696	21594	3.46	3.0E-94	4687556	NT	Homo sapiens E1A binding protein p500 (EP300) mRNA
4095	13995	23772	0.82	3.0E-94	AA464806.1	EST_HUMAN	zfp508.1 Soares, total, fetal, INZHF8, 9w Homo sapiens cDNA clone IMAGE:774782.5
6484	15403	25466	3.58	3.0E-94	11480268	NT	Homo sapiens zinc finger protein ZNF277 (ZNF277), mRNA
5881	15787	26909	4.16	3.0E-94	11530228	NT	Homo sapiens chromosome 21 open reading frame 18 (C21ORF18), mRNA
6771	16550	26938	1.16	3.0E-94	AF162003.1	NT	Homo sapiens proboscoidin alpha 13 (PODH-alpha13) mRNA, complete cds
6692	16669	27052	3.76	3.0E-94	AB014576.1	NT	Homo sapiens mRNA for KIAA0267 protein, partial cds
7533	17384	27594	4.36	3.0E-94	AF087942.1	NT	Homo sapiens glycocalyx-11A mRNA, complete cds
8449	18321	28590	1.76	3.0E-94	4757821	NT	Homo sapiens axonal transport of synaptic vesicles (ATSV) mRNA
8628	18736	29029	2.27	3.0E-94	U28711.1	NT	Human cblb truncated form 1 lacking leucine zipper mRNA, complete cds
143	10117	19637	2.24	1.0E-94	BE396714.1	EST_HUMAN	601176702F1 NIH, MGC, 17 Homo sapiens cDNA clone IMAGE:35931038.5
3050	12977	22769	1.91	1.0E-94	BE35433.1	EST_HUMAN	60111696F1 NIH, MGC, 16 Homo sapiens cDNA clone IMAGE:3352549.5
3050	12977	22770	1.91	1.0E-94	BE35433.1	EST_HUMAN	60111696F1 NIH, MGC, 16 Homo sapiens cDNA clone IMAGE:3352549.5
4261	14160	26638	1.13	1.0E-94	3006622	NT	Homo sapiens hypoxanthine phosphoribosyl transferase protein (FLJ20746), mRNA
7331	17295	27193	1.93	1.0E-94	11428370	NT	Homo sapiens period box gene 2 (P-box lineage specific activator protein) (PAX5), mRNA
7636	17487	27707	1.41	1.0E-94	BE782478.1	EST_HUMAN	601468748F1 NIH, MGC, 37 Homo sapiens cDNA clone IMAGE:3872009.5
8416	18292	28546	2.46	1.0E-94	U05590.1	NT	Homo sapiens IL-1 receptor antagonist L-Ra (IL-1RN) gene, alternatively spliced forms, complete cds
8635	18500	28775	2.19	1.0E-94	A27294.1	EST_HUMAN	ap2262.21 Schiller, oligodendrogloma Homo sapiens cDNA clone IMAGE:1958122.3 similar to TR.Q62845
8759	10177	19377	1.98	1.0E-94	BE265714.1	EST_HUMAN	Q62845 NEURAL CELL ADHESION PROTEIN BIG-2 PRECURSOR.
1461	13066	21230	1.86	9.0E-95	AF027302.1	NT	601176702F1 NIH, MGC, 17 Homo sapiens cDNA clone IMAGE:3831038.5
3118	13043	22639	1.13	9.0E-95	7662027	NT	Homo sapiens TNF-alpha stimulated ABC protein (ABC50) mRNA, complete cds
3718	13043	22640	1.13	9.0E-95	7662027	NT	Homo sapiens KIAA0255 gene product (KIAA0255), mRNA
6801	10090	20669	1.87	9.0E-95	AF274753.1	NT	Homo sapiens KIAA0255 gene product (KIAA0255), mRNA
						NT	Homo sapiens progressive amyloid-like protein (ANK) mRNA, complete cds
						EST_HUMAN	w60604.x1 NC1, CGAP, L204 Homo sapiens cDNA clone IMAGE:2340506.3 similar to gbXK00558
4436	14331	24119	1.59	8.0E-95	A700698.1	EST_HUMAN	TUBULIN ALPHA-1 CHAN (HUMAN);
4436	14331	24120	1.59	8.0E-95	A700698.1	EST_HUMAN	TUBULIN ALPHA-1 CHAN (HUMAN);
6294	16158	26314	1.83	8.0E-95	11429529	NT	Homo sapiens profilin (profilin, mactropin) 26S subunit, non-ATPase, 11 [PSMD11], mRNA
6294	16158	26315	1.83	8.0E-95	11429529	NT	Homo sapiens profilin (profilin, mactropin) 26S subunit, non-ATPase, 11 [PSMD11], mRNA
9770	16646	26937	2.05	8.0E-95	AF03897.1	NT	Homo sapiens potassium channel subunit (HERG-3) mRNA, complete cds
7397	17306	27615	1.73	8.0E-95	11420044	NT	Homo sapiens KIAA0255 gene product (KIAA0255), mRNA
7397	17306	27616	1.73	8.0E-95	11420044	NT	Homo sapiens KIAA0255 gene product (KIAA0255), mRNA
7697	17517	27744	2.82	8.0E-95	6174644	NT	Homo sapiens proline dehydrogenase (proline oxidase) (PRODH) mRNA

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7681	17531		2.83	8.0E-95	AB037816.1	NT	Human sapiens mRNA for KIAA1395 protein, partial cds
9066	17897	28236	2.41	8.0E-95	AF112152.1	NT	Human sapiens dendritic arbor and neural crest EGF-like protein mRNA, complete cds zu8407.1 at Source, testis, NHT Homo sapiens cDNA clone IMAGE:744549 3' similar to contains L111 L1 repetitive element;
9069	18242		8.68	8.0E-95	AA029056.1	EST_HUMAN	Homo sapiens DNA for amyloid precursor protein, complete cds
274	10240	20055	9.46	7.0E-95	D87676.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
274	10240	20059	9.46	7.0E-95	D87676.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
4270	14769	23947	5.94	7.0E-95	U65708.1	NT	Homo sapiens Ly-6-like protein (CD85) mRNA, complete cds
4316	14213		1.38	7.0E-95	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21Q046
4582	14857	24023	1.03	7.0E-95	U59529.1	NT	Human homeobox protein (PHOX1) mRNA, 3' and
5340	15281	25087	1.76	3.0E-95	BF526041.1	EST_HUMAN	Human homeobox protein (PHOX1) mRNA, 3' and
922	10947	20994	0.86	2.0E-95	4504374	NT	Homo sapiens H factor 1 (complement) (HFI1) mRNA
1625	11529	21397	1.6	2.0E-95	7662027	NT	Homo sapiens KIAA0255 gene product (KIAA0255), mRNA
1625	11529	21398	1.6	2.0E-95	7662027	NT	Homo sapiens KIAA0255 gene product (KIAA0255), mRNA
1857	11763	21972	7.79	2.0E-95	4507512	NT	Homo sapiens tissue inhibitor of metalloproteinase 5 (Serpine1/furin, pseudoinflammatory) (TIMP5) mRNA
1857	11763	21976	3.3	2.0E-95	BE393873.1	EST_HUMAN	Human sapiens cDNA clone IMAGE:3558662 5'
2376	12265	22147	1.3	2.0E-95	5453656	NT	Homo sapiens G protein-coupled receptor 19 (GPR19) mRNA
2376	12265	22148	1.3	2.0E-95	5453656	NT	Homo sapiens G protein-coupled receptor 19 (GPR19) mRNA
2417	12294	22191	16.85	2.0E-95	AF240766.1	NT	Homo sapiens glutathione S-transferase beta 2 (GSTT2) and glutathione S-transferase beta 1 (GSTT1) genes, complete cds
2465	12342	22235	2.46	2.0E-95	4759423	NT	Homo sapiens glycine cleavage system protein H (aminomalyl carrier) (GCSH) mRNA
2187	10340	20055	0.86	2.0E-95	4504374	NT	Homo sapiens H factor 1 (complement) (HFI1) mRNA
3120	13045	22542	3.51	2.0E-95	AF154552.1	NT	Homo sapiens Usher-pig-german mRNA, complete cds
3571	13435	23232	2.78	2.0E-95	7706009	NT	Homo sapiens unconventional myosin-15 (LOC31188), mRNA
3571	13435	23233	2.78	2.0E-95	7706009	NT	Homo sapiens unconventional myosin-15 (LOC31188), mRNA
3585	13475	23268	0.96	2.0E-95	AB037807.1	NT	Homo sapiens mRNA for KIAA1395 protein, partial cds
3680	13604	23390	1.02	2.0E-95	AZ02054.1	EST_HUMAN	Human sapiens mRNA for KIAA1395 protein, partial cds
4254	14163	23340	2.3	2.0E-95	7657185	NT	Human sapiens hypothetical protein (HSP32281A), mRNA
4271	14164	24615	2.57	2.0E-95	7657185	NT	Human sapiens KIAA0187 gene product (KIAA0187), mRNA
5022	14854	24863	0.99	2.0E-95	AA447831.1	EST_HUMAN	Human sapiens KIAA0187 gene product (KIAA0187), mRNA
5022	14854	24864	0.98	2.0E-95	AA447831.1	EST_HUMAN	Human sapiens KIAA0187 gene product (KIAA0187), mRNA
5367	15287	25121	3.69	2.0E-95	77057694	NT	Human sapiens KIAA0187 gene product (KIAA0187), mRNA
5367	15287	25122	3.69	2.0E-95	77057694	NT	Human sapiens KIAA0187 gene product (KIAA0187), mRNA

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5734	15642	25748	4.54	2.0E-95	M59724.1	NT	Human muscle-type phosphofructokinase (PFKM) gene, exon 7
5957	15652	25864	2.25	2.0E-95	AF257737.1	NT	Human sapiens ciliary dyman heavy chain 9 (DNAH9) mRNA, complete cds
6055	16033	26179	1.62	2.0E-95	11435773	NT	Homo sapiens huntingtin (Huntington disease) (HD), mRNA
8106	17596	28245	2.36	2.0E-95	4757853	NT	Homo sapiens bone morphogenetic protein receptor, type IA (BMPRIA) mRNA
9402	19084	25285	1.98	2.0E-99	AF240786.1	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds
9840	19336	25211	4.34	2.0E-95	11418164	NT	Homo sapiens adenylosuccinate lyase (ADSL), mRNA
6430	19371	25427	7.73	1.0E-95	AA284951.1	EST_HUMAN	TRC1067084 Sources ovary tumor Nb-HOT Homo sapiens cDNA clone IMAGE:714007 5' similar to
6430	19371	25427	7.73	1.0E-95	AA284951.1	EST_HUMAN	TRC1067084 Sources ovary tumor Nb-HOT Homo sapiens cDNA clone IMAGE:714007 5' similar to
6437	19298	28420	7.73	1.0E-95	AF294951.1	EST_HUMAN	TRC1067084 Sources ovary tumor Nb-HOT Homo sapiens cDNA clone IMAGE:714007 5' similar to
6437	19298	28420	4.85	1.0E-95	BF370000.1	EST_HUMAN	TRC1067084 Sources ovary tumor Nb-HOT Homo sapiens cDNA clone IMAGE:714007 5' similar to
6437	19298	28461	4.85	1.0E-95	BF370000.1	EST_HUMAN	TRC1067084 Sources ovary tumor Nb-HOT Homo sapiens cDNA clone IMAGE:714007 5' similar to
6737	16646	26836	1.87	0.0E-99	BE697259.1	EST_HUMAN	RC6-FN0019-259600-011-G11 FN0019 Homo sapiens cDNA
435	12696	20201	0.82	8.0E-99	BE697097.1	EST_HUMAN	RC6-FN0019-259600-011-G11 FN0019 Homo sapiens cDNA
435	12696	20202	0.82	8.0E-99	BE697097.1	EST_HUMAN	RC6-FN0019-259600-011-G11 FN0019 Homo sapiens cDNA
5333	13302	23438	2.96	8.0E-99	AF168047.1	EST_HUMAN	RC6-FN0019-259600-011-G11 FN0019 Homo sapiens cDNA
3834	13748	23438	0.95	7.0E-99	AF219320.1	NT	RC6-FN0019-259600-011-G11 FN0019 Homo sapiens cDNA
2233	12399	22033	0.85	0.0E-99	BE171884.1	EST_HUMAN	RC6-FN0019-259600-011-G11 FN0019 Homo sapiens cDNA
3276	13107	22097	0.95	0.0E-99	AF163201.2	NT	RC6-FN0019-259600-011-G11 FN0019 Homo sapiens cDNA
3437	13354	23156	25.15	0.0E-99	N26973.1	NT	RC6-FN0019-259600-011-G11 FN0019 Homo sapiens cDNA
8531	16844	26927	1.88	0.0E-99	7662289	NT	RC6-FN0019-259600-011-G11 FN0019 Homo sapiens cDNA
8531	16844	26928	1.88	0.0E-99	7662289	NT	RC6-FN0019-259600-011-G11 FN0019 Homo sapiens cDNA
8870	16892	26972	2.09	6.0E-95	8623539	NT	RC6-FN0019-259600-011-G11 FN0019 Homo sapiens cDNA
317	10276	20099	2.7	5.0E-99	AB032968.1	NT	RC6-FN0019-259600-011-G11 FN0019 Homo sapiens cDNA
824	10751	20099	3.06	6.0E-99	AB032968.1	NT	RC6-FN0019-259600-011-G11 FN0019 Homo sapiens cDNA
824	10751	20099	3.06	6.0E-99	AB032968.1	NT	RC6-FN0019-259600-011-G11 FN0019 Homo sapiens cDNA
2576	12447	22713	2.31	5.0E-95	11416767	NT	RC6-FN0019-259600-011-G11 FN0019 Homo sapiens cDNA
2591	12519	22713	0.98	5.0E-95	69127355	NT	RC6-FN0019-259600-011-G11 FN0019 Homo sapiens cDNA
4810	14694	26153	1.22	5.0E-95	X06912.1	NT	RC6-FN0019-259600-011-G11 FN0019 Homo sapiens cDNA
6095	10048	26153	4.23	5.0E-95	11424309	NT	RC6-FN0019-259600-011-G11 FN0019 Homo sapiens cDNA
6095	10048	26153	4.23	5.0E-95	11424309	NT	RC6-FN0019-259600-011-G11 FN0019 Homo sapiens cDNA
6719	16599	26786	1.81	5.0E-95	M68347.1	NT	RC6-FN0019-259600-011-G11 FN0019 Homo sapiens cDNA
6719	16599	26786	1.81	5.0E-95	M68347.1	NT	RC6-FN0019-259600-011-G11 FN0019 Homo sapiens cDNA

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Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4067	13997		6.22	3.0E-66	AF69563.1	EST_HUMAN	y871121.1 Soares fetal liver spleen INFLS Homo sapiens cDNA clone IMAGE:212327.5'
406	10355		3.46	2.0E-66	4600038	NT	Homo sapiens chondroclast sulfate proteoglycan 4 (melanoma-associated) (CSPG4), mRNA
730	10692	20464	1.96	2.0E-66	AL18248.2	NT	Homo sapiens chondroclast sulfate proteoglycan 4 (melanoma-associated) (CSPG4), mRNA
4651	14537	24326	1.98	2.0E-66	BE148074.1	EST_HUMAN	RC3-H10230.040500-110-g02 H10230 Homo sapiens cDNA
7191	17058		5.08	2.0E-66	AF692461.1	EST_HUMAN	AV692461 GKC Homo sapiens cDNA clone GKCFCMD07.5'
6151	18623		2.05	2.0E-66	AF142440.1	EST_HUMAN	2819351.5primo NIH_MGC_7 Homo sapiens cDNA clone IMAGE:2819351.5'
655	10590	20408	1.69	1.0E-66	U78950.1	NT	Human endogenous retrovirus type K (HERV-K), gag, pol and env genes
1742	16443	21510	2.03	1.0E-66	AW55054.1	EST_HUMAN	EST357124.1 IMAGE sequences, VAGG Homo sapiens cDNA
1742	16443	21511	2.03	1.0E-66	AW55054.1	EST_HUMAN	EST357124.1 IMAGE sequences, VAGG Homo sapiens cDNA
1846	11703	21580	0.96	1.0E-66	4563758	NT	Homo sapiens flavin containing monooxygenase 2 (FMO2) mRNA
1846	11703	21581	0.96	1.0E-66	4563758	NT	Homo sapiens flavin containing monooxygenase 2 (FMO2) mRNA
2181	12068	21898	1.33	1.0E-66	U75637.1	NT	Human hepatocyte growth factor gene, exon 1
2181	12068	21899	1.33	1.0E-66	U75637.1	NT	Human hepatocyte growth factor gene, exon 1
2219	12650	22066	1.88	1.0E-66	U51472.2	NT	Felis catus superficial myosin heavy chain (MHF) mRNA, complete cds
7035	16855	27125	20.95	1.0E-66	11419429	NT	Homo sapiens similar to actinucleotide pyrophosphatase/phosphodiesterase 3 (H. sapiens) (LOC83214), mRNA
7138	17015	27208	1.08	1.0E-66	AF274893.1	NT	Homo sapiens secretory pathway component Sec3/B-1 mRNA, alternatively spliced, complete cds
7843	17693	27938	1.64	1.0E-66	AB033116.1	NT	Homo sapiens mRNA for KIAA1260 protein, partial cds
7843	17693	27938	1.64	1.0E-66	AB033116.1	NT	Homo sapiens mRNA for KIAA1260 protein, partial cds
3285	13206	20066	0.95	6.0E-67	BF245240.1	EST_HUMAN	601963712F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:4081202.5'
9439	18319		2.75	6.0E-67	BE141849.1	EST_HUMAN	ILB-H10117F1-1059-004-007 HT0117 Homo sapiens cDNA
6672	16592	26747	1.76	5.0E-67	AL043314.2	EST_HUMAN	DKFZ:434N0323_1 434 (synonym: hies3) Homo sapiens cDNA clone DKFZ:434N0323.5'
6735	16614	26864	10.79	5.0E-67	AA418026.1	EST_HUMAN	246712.1 Soares NIHMP1.L31 Homo sapiens cDNA clone IMAGE:767788.3' similar to TR:G1304125 G1304126 PMSA mRNA.1
7578	17426	27643	2.76	5.0E-67	BF164912.1	EST_HUMAN	RCO-BT0812-250600-032-409 BT0812 Homo sapiens cDNA
8832	18645	28529	1.97	5.0E-67	BE146597.1	EST_HUMAN	MRQ-HT0241-155500-010-502 HT0241 Homo sapiens cDNA
8832	18645	28530	1.97	5.0E-67	BE146597.1	EST_HUMAN	MRQ-HT0241-155500-010-502 HT0241 Homo sapiens cDNA
924	10849	20087	1.26	4.0E-67	BE004360.1	EST_HUMAN	OMO-BN106-170300-203-a06 BN106 Homo sapiens cDNA
1898	11764	21938	1.08	4.0E-67	5435572	NT	Homo sapiens bradefin, A-inhibited guanine nucleotide-exchange protein 2 (GIC2), mRNA
6082	10027	28167	6.1	4.0E-67	Y11339.2	NT	Homo sapiens mRNA for GalNAc alpha-2, 6-sialyltransferase 1, long form
6082	10027	28168	6.1	4.0E-67	Y11339.2	NT	Homo sapiens mRNA for GalNAc alpha-2, 6-sialyltransferase 1, long form
6607	10746	28635	1.41	4.0E-67	11421793	NT	Homo sapiens v-src aden sarcoma (Schmidt-Ruppin A-2) viral oncogene homolog (SRC), mRNA
7328	17252	27453	1.17	4.0E-67	AB011106.1	NT	Homo sapiens mRNA for KIAA0364 protein, partial cds

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Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7328	17232	27434	1.17	4.0E-97	AB011668.1	NT	Homo sapiens mRNA for KIA00694 protein, partial cds
8503	18376	28641	1.76	4.0E-97	11963122	NT	Homo sapiens AXL receptor tyrosine kinase (AXL), transcript variant 1, mRNA
8503	18376	28642	1.76	4.0E-97	11963122	NT	Homo sapiens AXL receptor tyrosine kinase (AXL), transcript variant 1, mRNA
8733	17862	28124	15.88	4.0E-97	AB042857.1	NT	Homo sapiens mRNA, similar to rat myomegalin, complete cds
8733	17862	28126	2.31	4.0E-97	AB033116.1	NT	Homo sapiens mRNA for KIAA1250 protein, partial cds
8739	17865	28126	2.31	4.0E-97	AB033116.1	NT	Homo sapiens mRNA for KIAA1250 protein, partial cds
8739	17865	28126	2.31	4.0E-97	AB033116.1	NT	Homo sapiens mRNA for KIAA1250 protein, partial cds
8331	18912	28126	3.93	4.0E-97	11418318	NT	Homo sapiens G-2 and S-phase expressed 1 (GTSE1), mRNA
2453	10210	28028	1.17	3.0E-97	AB032998.1	NT	Homo sapiens mRNA for KIAA1172 protein, partial cds
856	10783	20533	10.96	3.0E-97	4502166	NT	Homo sapiens amyloid beta (A4) precursor protein (protease neurin-II, Alzheimer disease) (APP), mRNA
856	10783	20534	10.96	3.0E-97	4502166	NT	Homo sapiens amyloid beta (A4) precursor protein (protease neurin-II, Alzheimer disease) (APP), mRNA
1423	12684	21166	1.77	3.0E-97	4758813	NT	Homo sapiens Numpy (and SIVA) interactor (NUI), mRNA
2359	12662	22161	1.92	3.0E-97	U03255.1	NT	Human beta-amine oxidase (BAO22) gene, exon 7
3223	13147	22848	1.14	3.0E-97	5174478	NT	Homo sapiens perlecanin (PONT) mRNA
4670	14856	24349	12.85	1.0E-97	4503470	NT	Homo sapiens eukaryotic translation elongation factor 1 alpha 1 (EEF1A1) mRNA
8572	16776	25897	2.19	1.0E-97	BE595486.1	EST_HUMAN	691339520F1 NIH MGCC 53 Homo sapiens cDNA clone IMAGE3681821 5'
8081	17679	28229	3.41	1.0E-97	11427197	NT	Homo sapiens KIAA0658 gene product (KIA0658), mRNA
8081	17679	28229	3.41	1.0E-97	11427197	NT	Homo sapiens KIAA0658 gene product (KIA0658), mRNA
8081	17679	28229	3.41	1.0E-97	11427197	NT	Homo sapiens KIAA0658 gene product (KIA0658), mRNA
8520	18464	28768	2.82	1.0E-97	AA53761.1	EST_HUMAN	Homo sapiens KIAA0658 gene product (KIA0658), mRNA
8763	17612	28156	13.54	1.0E-97	11426272	NT	Homo sapiens ribosomal protein S18 (RPS18), mRNA
8763	17612	28157	13.54	1.0E-97	11426272	NT	Homo sapiens ribosomal protein S18 (RPS18), mRNA
853	10509	20556	8	9.0E-98	BE590973.1	EST_HUMAN	PM4-B10724-010400-005-e12 E10724 Homo sapiens cDNA
1295	11162	21012	1.29	9.0E-98	8393092	EST	Homo sapiens cat eye syndrome critical region gene 1 (CECR1), mRNA
8623	16503	25901	4.74	9.0E-98	4758119	NT	Homo sapiens dual-isoassociated protein (DAP), mRNA
8623	16503	25902	4.74	9.0E-98	4758119	NT	Homo sapiens dual-isoassociated protein (DAP), mRNA
7271	17148	27342	2.71	9.0E-98	XG9860.1	NT	Human mRNA for amyloid A4(751) protein
7319	17148	27346	2.41	9.0E-98	11321560	NT	Homo sapiens succinate-CoA ligase, GDP-forming, alpha subunit (SUCLG1), mRNA
7355	17223	27423	1.39	9.0E-98	AB037765.1	NT	Homo sapiens mRNA for KIAA1365 protein, partial cds
8359	18246	28497	2.24	9.0E-98	AB032222.1	NT	Homo sapiens mRNA for KIAA1095 protein, partial cds
8359	18246	28498	2.24	9.0E-98	AB032222.1	NT	Homo sapiens mRNA for KIAA1095 protein, partial cds
9045	10059	20558	4.97	9.0E-98	BE59573.1	EST_HUMAN	PM4-B10724-010400-005-e12 E10724 Homo sapiens cDNA
1350	11295	21112	0.89	8.0E-98	AB035765.1	NT	Homo sapiens HPAD-oligomer mRNA for epistatocytin domain type 1, complete cds
1540	11444	21303	1.04	8.0E-98	9331810	NT	Homo sapiens IL2-inducible T-cell kinase (ITK), mRNA

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## Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF-SEC ID NO.	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1540	11444	21304	1.04	8.0E-98	5031810	NT	Homo sapiens IL2-inducible T-cell kinase (ITK), mRNA
1695	11597	21468	0.98	8.0E-99	AB017007.1	NT	Homo sapiens PMS3.16 mRNA, partial cds
1695	11597	21468	0.98	8.0E-99	AB017007.1	NT	Homo sapiens PMS3.16 mRNA, partial cds
3726	13638	23424	5.03	8.0E-98	J04460.1	NT	Human mitochondrial creatine kinase (CKMT) gene, complete cds
5049	14921		0.86	8.0E-99	AL116301.2	NT	Homo sapiens chromosome 21 segment HS210001
9717	19289	25220	1.29	4.0E-99	BE34872.1	EST_HUMAN	HD0002.x1 NCL_OGAP_Luz21 Homo sapiens cDNA clone IMAGE:3151899 3'
2131	12019	21917	1.21	3.0E-99	AL403124.1	EST_HUMAN	AJ403124.3.7 (downregulated in larynx carcinoma) Homo sapiens cDNA clone lb
2595	12495	22329	1.85	3.0E-99	AB017490.1	NT	Homo sapiens mRNA for KIAA0707 protein, partial cds
2720	12592		2.09	3.0E-99	AB017496.1	EST_HUMAN	7B18H01 Chromosome 7 Fetal Brain cDNA Library Homo sapiens cDNA clone 7B18H01
6147	19020	28159	1.7	3.0E-99	11419210	NT	Homo sapiens activator of S phase kinase (ASK), mRNA
6147	19020	28160	1.7	3.0E-99	11419210	NT	Homo sapiens activator of S phase kinase (ASK), mRNA
7033	19960	27153	3.31	3.0E-99	U46968.1	EST_HUMAN	Yc17g09.1 Soares adult brain N269-B95Y Homo sapiens cDNA clone IMAGE:78240 5'
7695	17595	27756	1.6	3.0E-99	AL403124.1	EST_HUMAN	AJ403124.3.7 (downregulated in larynx carcinoma) Homo sapiens cDNA clone lb
7695	17595	27760	1.6	3.0E-99	AL403124.1	EST_HUMAN	AJ403124.3.7 (downregulated in larynx carcinoma) Homo sapiens cDNA clone lb
8322	18199	28448	5.16	3.0E-99	U56309.1	NT	Human fumaraate precursor (FH) mRNA, nuclear gene encoding mitochondrial protein, complete cds
8995	19379		2.97	3.0E-99	11418177	NT	Homo sapiens Ran GTPase activating protein 1 (RANGAP1), mRNA
2035	11924	21816	28.05	2.0E-99	BE294384.1	EST_HUMAN	60172558F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:363134 5'
2191	12075	21983	1.45	2.0E-99	AL153032.2	NT	Homo sapiens chromosome 21 segment HS210002
4199	14069	23860	0.96	2.0E-99	AF032897.1	NT	Homo sapiens potassium channel subunit (HERG-3) mRNA, complete cds
4294	14143	23916	4.94	2.0E-99	AF769331	NT	Homo sapiens fatty-acid-Coenzyme A ligase, long-chain 4 (FACL4) mRNA
4720	14868	24390	1.51	2.0E-99	AF218002.1	NT	Homo sapiens atrial natriuretic precursor (ATN) gene, exon 10
4720	14868	24391	1.51	2.0E-99	AF218002.1	NT	Homo sapiens atrial natriuretic precursor (ATN) gene, exon 10
5099	14939	24711	6.39	2.0E-99	0956269	NT	Homo sapiens low density lipoprotein receptor related protein-deleted in tumor (LRPDI), mRNA
5099	14939	24712	6.39	2.0E-99	0956269	NT	Homo sapiens low density lipoprotein receptor related protein-deleted in tumor (LRPDI), mRNA
5163	15029	24766	1.09	2.0E-99	4758975	NT	Homo sapiens protein tyrosine kinase 2 beta (PTK2B) mRNA
5303	16224	25028	4.86	2.0E-99	7709812	NT	Homo sapiens PDZ domain-containing guanine nucleotide exchange factor 1 (LOC51735), mRNA
7004	18881	27073	3.87	2.0E-99	11428813	NT	Homo sapiens SH3-domain GRB2-like 2 (SH3GL2), mRNA
7004	18881	27074	3.87	2.0E-99	11428813	NT	Homo sapiens SH3-domain GRB2-like 2 (SH3GL2), mRNA
7497	17367	27572	1.51	2.0E-99	X12984.1	NT	H-sapiens arginase gene exon 3 (EC 3.5.3.1)
7951	17601		1.18	2.0E-99	7709808	NT	Homo sapiens AIM-1 protein (LOC51151), mRNA
9330	19026	26501	1.43	2.0E-99	11435947	NT	Homo sapiens chromosome 12 open reading frame 3 (C12ORF3), mRNA
399	10346	20172	18.93	1.0E-99	AB82007.1	EST_HUMAN	W6504.x1 NCL_OGAP_UH Homo sapiens cDNA clone IMAGE:2261743 3' similar to SW-RL2B_HUMAN P29516.60S RIBOSOMAL PROTEIN L23A.1



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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
447	10391	20212	2.98	1.0E-58	AW698511.1	EST_HUMAN	PMO-BN0065-103901-007-c06 BN0065 Homo sapiens cDNA
1750	11655	21526	10.96	1.0E-58	N48818.1	EST_HUMAN	YV2063.11 Sources fetal liver spleen INFL3 Homo sapiens cDNA clone IMAGE243985 3' similar to PIR-S4204 S5-024 ribosomal protein L29 - human ;
5256	15178	24953	0.56	1.0E-48	AA16954.1	EST_HUMAN	294-c06.7 Strategene muscle 837209 Homo sapiens cDNA clone IMAGE.026240 5' similar to TR.0800562
7203	17080	27265	1.35	1.0E-55	AF141346.1	NT	G806562 NEBULIN ;
7203	17080	27267	1.35	1.0E-48	AF141346.1	NT	Homo sapiens beta-tubulin mRNA, complete cds
5581	15590	25952	4.20	9.0E-59	AW69935.1	EST_HUMAN	Homo sapiens beta-tubulin mRNA, complete cds
8465	18338	29502	2.6	9.0E-59	AA175926.1	EST_HUMAN	EM9907.X1 NCI CGAP_Bm25 Homo sapiens cDNA clone IMAGE.2183421 3' similar to SW.BID_HUMAN
8465	18339	29503	2.6	9.0E-59	AA175929.1	EST_HUMAN	EM9907.X1 NCI CGAP_Bm25 Homo sapiens cDNA clone IMAGE.2183421 3' similar to SW.BID_HUMAN
8716	18533	29817	1.84	9.0E-59	AA13404.1	EST_HUMAN	P55957.BH3 INTERACTING DOMAIN DEATH AGONIST ;
7095	16942	27134	1.16	8.0E-58	AF035407	EST_HUMAN	P55957.BH3 INTERACTING DOMAIN DEATH AGONIST ;
5591	15477	26500	9.2	7.0E-59	AF013503.1	NT	Human endogenous retrovirus, complete genome
8884	16955	26988	2.31	7.0E-59	AF013503.1	NT	Homo sapiens occludin (NLD) gene, exon 5
2080	11070	21863	0.53	9.0E-59	11430555	NT	Homo sapiens NK-receptor (KIR-029) gene, intron region exon
2080	11070	21864	0.63	9.0E-59	11430555	NT	Homo sapiens cytochrome-rich repeat-containing protein S52 precursor, [LOC51222], mRNA
2090	11070	21864	0.63	9.0E-59	11430555	NT	Homo sapiens cytochrome-rich repeat-containing protein S52 precursor, [LOC51222], mRNA
3814	13723	23517	1.87	8.0E-59	AW973304.1	EST_HUMAN	EST1589473 IMAGE resequences, MAGI Homo sapiens cDNA
4042	14330	24515	1.16	9.0E-59	4302800	NT	Homo sapiens CD34 antigen (CD34) mRNA
5073	15917	25947	2.36	9.0E-59	439510.1	NT	Homo sapiens polycystic kidney disease (PKD) gene, exon 27-30
6013	15917	26248	2.36	9.0E-59	439510.1	NT	Homo sapiens polycystic kidney disease (PKD) gene, exon 27-30
8718	18598	26787	1.21	9.0E-59	X89101.1	NT	H. sapiens mRNA for estrogen receptor
7095	16806	27100	2.18	9.0E-59	AB056429.1	NT	Homo sapiens NDS14 mRNA for N-deacetylase-N-sulfotransferase 4, complete cds
7143	17020	27213	3.57	9.0E-59	AF080295.1	NT	Homo sapiens NDS14 mRNA for N-deacetylase-N-sulfotransferase 4, complete cds
7143	17020	27214	3.57	9.0E-59	AF080295.1	NT	Homo sapiens NDS14 mRNA for N-deacetylase-N-sulfotransferase 4, complete cds
8102	17962	28241	3.72	9.0E-59	11592269	NT	Homo sapiens NDS14 mRNA for N-deacetylase-N-sulfotransferase 4, complete cds
902	10827	20971	0.86	9.0E-59	U35464.1	NT	Homo sapiens BHS interacting domain death agonist (BID), mRNA
902	10827	20972	0.86	9.0E-59	U35464.1	NT	Human protein C inhibitor (PCI-B) mRNA, complete cds
1922	11817	21090	1.21	9.0E-59	Y1395.1	NT	Human protein C inhibitor (PCI-B) mRNA, complete cds
4463	14357	24148	1.35	9.0E-59	AF00590.1	NT	H. sapiens mRNA for estrogen receptor
5085	14356	24708	2.46	9.0E-59	4756957	NT	Homo sapiens T cell receptor beta locus, TCRBV35A2 to TCRBV1252 region
9350	19032		2.1	9.0E-59	BE590177.1	EST_HUMAN	Homo sapiens mannosidase, alpha, class 2A, member 1 (MAN2A1), mRNA
							G019315/171 FH_MGC_71 Homo sapiens cDNA clone IMAGE.9311391 5'

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6944	19729		5.37	3.0E-96	M6596.1	NT	Human E2AFH4 fusion protein (E2AFH4) mRNA, complete cds
1219	11128		3.46	2.0E-96	AW274792.1	EST_HUMAN	xp0063.1 NC1 CGAP HN9 Homo sapiens cDNA clone IMAGE:2799874 3' similar to gp.M31212 MYOSIN LIGHT CHAIN ALKALI NON-MUSCLE ISOFORM (HUMAN).
3220	13144	22947	1.06	2.0E-96	M30938.1	NT	Human Ku (p70/p80) subunit mRNA, complete cds
4443	14337	24127	3.15	2.0E-96	AF065703.1	NT	Human sapiens short chain L-3-hydroxyacyl-CoA dehydrogenase precursor (HACHSO) gene, nuclear gene encoding mitochondrial protein, complete cds
7053	10630	27121	9.75	2.0E-96	W3507.1	EST_HUMAN	24-63807.1 Soares fetal lung NIH/NIH Homo sapiens cDNA clone IMAGE:308835 5' similar to gp.M19182 BETA-GLUCURONIDASE PRECURSOR (HUMAN);
8451	18324	28993	3.83	2.0E-96	AF247457.2	NT	Homo sapiens myosin X (MYOT10) mRNA, complete cds
312	10379	20053	1.53	1.0E-96	AF114487.1	NT	Homo sapiens GA-binding protein transcription factor, alpha subunit (GABPA) mRNA
376	10329	20152	1.04	1.0E-96	116281.50	NT	Homo sapiens intercalin long isoform (ITSN) mRNA, complete cds
1401	11309	21168	2.11	1.0E-96	M30938.1	NT	Human Ku (p70/p80) subunit mRNA, complete cds
1537	11441	21268	1.47	1.0E-96	AF192823.1	NT	Homo sapiens truncated Nucleosome-Pol C3 protein (NPEC3) mRNA, complete cds
1837	11441	21269	1.47	1.0E-96	AF192823.1	NT	Homo sapiens truncated Nucleosome-Pol C3 protein (NPEC3) mRNA, complete cds
1985	11761	21859	1.11	1.0E-96	4603730	NT	Homo sapiens FK506-binding protein 6 (FKBP6) mRNA, complete cds
1865	11761	21857	1.11	1.0E-96	4603730	NT	Homo sapiens FK506-binding protein 6 (FKBP6) mRNA, complete cds
3046	12873	22766	0.86	1.0E-96	J03171.1	NT	Homo sapiens FK506-binding protein 6 (FKBP6) mRNA, complete cds
4283	14162	23550	2.74	1.0E-96	AF086018.1	NT	Human interferon-alpha receptor (HuIFN- $\alpha$ 1R) mRNA, complete cds
4283	14162	23561	2.74	1.0E-96	AF086018.1	NT	Human sapiens fatty acid amide hydrolase (FAAH) gene, exon 14
5200	15063		1.18	1.0E-96	AL103261.2	NT	Human sapiens fatty acid amide hydrolase (FAAH) gene, exon 14
7305	17181		1.16	1.0E-96	11419721	NT	Homo sapiens ALEX1 protein (LOC251959) mRNA
7483	17953	27557	1.86	1.0E-96	AW340174.1	EST_HUMAN	h02002.3 Soares NFL_T_GBC S1 Homo sapiens cDNA clone IMAGE:2904371 3' similar to TR.O02711 O02711 PRO-UT-PUTASE POLYPROTEIN ;
6893	18571	28854	2.4	1.0E-96	AB023222.1	NT	Homo sapiens mRNA for KIAA1005 protein, partial cds
9126	18884		3.76	1.0E-96	AF240789.1	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds
1	9999	19780	1.13	1.0E-100	AL103247.2	NT	Homo sapiens chromosome 21 segment HS21C047
2	9999	19780	1.93	1.0E-100	AL103247.2	NT	Homo sapiens chromosome 21 segment HS21C047
62	10048	19859	1.48	1.0E-100	11418230	NT	Homo sapiens T-cell-specific XK-related protein on Y (XKRY) mRNA
62	10048	19859	1.48	1.0E-100	11418230	NT	Homo sapiens T-cell-specific XK-related protein on Y (XKRY) mRNA
81	10095	19953	1.52	1.0E-100	AW279237.1	EST_HUMAN	xv75b1.x1 NC1 CGAP Bmi3 Homo sapiens cDNA clone IMAGE:2924003 3'
162	17135	19950	1.16	1.0E-100	AL103203.2	NT	Homo sapiens chromosome 21 segment HS21C006
314	10279	20095	1.01	1.0E-100	AL103249.2	NT	Homo sapiens chromosome 21 segment HS21C049
340	10289	20114	2.43	1.0E-100	T03097.1	EST_HUMAN	ES102975 Fetal brain, Stasigen (cell692620) Homo sapiens cDNA clone HBCR32

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Table 4

### Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
430	10375		1.53	1.0E-100/AFO3528.1	NT	Homo sapiens X-linked aniridoid ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions	
481	10425		7.04	1.0E-100/XR631.1	EST_HUMAN	G.gottia DNA for ZNF80 gene homolog	
500	10442	20255	4.17	1.0E-100/BE180908.1	EST_HUMAN	RC3-H10G25-040500-022-209 HT0025 Homo sapiens cDNA	
1002	10920	20763	2.43	1.0E-100/7691695	NT	Homo sapiens DKZF-ZS6M0122 protein (DKZF-ZS6M0122), mRNA	
1002	10920	20764	2.43	1.0E-100/7691695	NT	Homo sapiens DKZF-ZS6M0122 protein (DKZF-ZS6M0122), mRNA	
1022	10920	20764	2.43	1.0E-100/7691695	NT	Homo sapiens DKZF-ZS6M0122 protein (DKZF-ZS6M0122), mRNA	
1528	11433		1.33	1.0E-100/AW207555.1	EST_HUMAN	U1H81L-sficc-07-Q1 at NCI CGAP Sub3 Homo sapiens cDNA clone IMAGE:272164.3'	
1533	11437	21294	1.46	1.0E-100/DX200857.1	EST_HUMAN	qf208a.1 Soares, levels -NCT CGAP Homo sapiens cDNA clone IMAGE:1754633.3' similar to SW-CYT_COTUA P31001 C/STATIN	
2195	12382		1.45	1.0E-100/DK3349.1	NT	Bat mRNA for short type PR-catharin, complete cds	
2386	12267	22160	1.05	1.0E-100/XZ4693.1	NT	H.sapiens mRNA for RH-gamma (PKC $\zeta$ )	
2674	12539	22429	1.87	1.0E-100/-11416876	NT	Homo sapiens RIAO40957 protein (RIA40957), mRNA	
2985	12513		2.45	1.0E-100/D11078.1	NT	Homo sapiens RGZ2 gene, retrovirus-like element	
4116	14016	23795	1.49	1.0E-100/AFO57534.1	NT	Homo sapiens myoblastin-related protein 1a mRNA, partial cds	
4143	14043	23816	1.87	1.0E-100/AFO57534.1	NT	Homo sapiens follicle stimulating hormone receptor (FSHR) mRNA	
8024	14597	24055	3.07	1.0E-100/5032-04	NT	Homo sapiens small optic lobes (Drosophila) homolog (SOUL) mRNA	
9024	14597	24060	3.07	1.0E-100/5032-04	NT	Homo sapiens small optic lobes (Drosophila) homolog (SOUL) mRNA	
9232	15156	24924	1.8	1.0E-100/BF24418.1	EST_HUMAN	UT195315dFt HEMBA1 Homo sapiens cDNA clone IMAGE:400395.5'	
9469	15415	25478	1.4	1.0E-100/AJ18182.1	EST_HUMAN	AJ171182 HEMBA1 Homo sapiens cDNA clone HEMBA103046.5'	
5514	15432	25490	1.55	1.0E-100/AJ132116.1	EST_HUMAN	Homo sapiens NF-E2-related factor 3 gene, complete cds	
9915	15521	25646	5.1	1.0E-100/AJ140214.1	EST_HUMAN	AJ140214 FLAGE2 Homo sapiens cDNA clone FLAGE200137.5'	
0015	15519	20349	1.41	1.0E-100/AJ0897.1	EST_HUMAN	X35068.3 Soares fetal liver splicing INEL5 Homo sapiens cDNA clone IMAGE:126134.3'	
8113	16010	20145	1.4	1.0E-100/BF375478.1	EST_HUMAN	WFI-TN045-069200-004-505 TN0049 Homo sapiens cDNA	
8116	16010	20147	1.4	1.0E-100/BF375478.1	EST_HUMAN	WFI-TN045-069200-004-505 TN0049 Homo sapiens cDNA	
8119	16013	20151	6.99	1.0E-100/XO4571.1	EST_HUMAN	Purkin mRNA for kidney epidermal growth factor (EGF) precursor	
9963	16341	27033	6.19	1.0E-100/BT109353.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C003	
6983	16860		5.44	1.0E-100/AL163203.2	NT	Homo sapiens mRNA for KIAA1185 protein, partial cds	
7322	17168	27398	3.2	1.0E-100/AB040918.1	NT	w37g99.x1 NC1 CGAP Pi28 Homo sapiens cDNA clone IMAGE:3931310.5'	
7369	17347		1.53	1.0E-100/AB72988.1	EST_HUMAN	w37g99.x1 NC1 CGAP Pi28 Homo sapiens cDNA clone IMAGE:2480920.3' similar to confidin element M232 negative element;	
7425	16439	26625	1.97	1.0E-100/AB90911.1	EST_HUMAN	PMD-BN0065-100300-001-036 BN0005 Homo sapiens cDNA	
7527	17378	27837	1.73	1.0E-100/AB049846.1	NT	Homo sapiens mRNA for KIAA1628 protein, partial cds	
7527	17378	27868	1.73	1.0E-100/AB049846.1	NT	Homo sapiens mRNA for KIAA1628 protein, partial cds	
7527	17378	27868	1.73	1.0E-100/AB049846.1	NT	Homo sapiens mRNA for KIAA1628 protein, partial cds	
7684	17514	27740	1.98	1.0E-100/AJ630349.1	EST_HUMAN	hB53c.v1 NC1 CGAP GU1 Homo sapiens cDNA clone IMAGE:2956399.5'	

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7694	17514	27741	1.00	1.0E-100	AW160487.1	EST_HUMAN	INS11c11.Y1 NC1 CGAP_GUT Homo sapiens cDNA clone IMAGE2096366 5'
8015	17698		1.29	1.0E-100	Y10391.1	EST	Human endogenous retrovirus HERV-K, pol gene
8147	19029	26275	5.23	1.0E-100	BF327262.1	EST_HUMAN	MIR-BND07C-270300-008.H1 BN0070 Homo sapiens cDNA
8009	18473	26745	2.14	1.0E-100	X94633.1	NT	H.sapiens CD97 gene exon 4
8006	18473	26746	2.14	1.0E-100	X94633.1	NT	H.sapiens CD97 gene exon 4
8000	18549	26831	4.59	1.0E-100	AF111170.3	NT	Homo sapiens 14332 Jagged2 gene, complete cds, and unknown gene
8003	18549	26832	4.59	1.0E-100	AF111170.3	NT	Homo sapiens 14332 Jagged2 gene, complete cds, and unknown gene
8003	18549	26832	1.93	1.0E-100	AL052422.2	NT	Homo sapiens chromosome 21 segment HS21Q47
8003	18549	19780	1.93	1.0E-100	AF209263.1	NT	Homo sapiens golgi-like protein (GLP) gene, complete cds
8003	18738		1.85	1.0E-100	AF209263.1	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds
8048	18832	29114	5.59	1.0E-100	AF240766.1	NT	Homo sapiens SH3-domain binding protein 1 (SH3BP1), mRNA
8391	19527	25302	2.21	1.0E-100	U1545732	NT	Homo sapiens transcobalamin II macrocyclic apoenzyme (TCN2), mRNA
8940	19409	25181	3.38	1.0E-100	U147874	NT	Homo sapiens SEC14 (S. cerevisiae) like 2 (SEC14L2), mRNA
70	10035	19871	1.22	1.0E-101	U110714	NT	Homo sapiens SEC14 (S. cerevisiae) like 2 (SEC14L2), mRNA
70	10035	19872	1.22	1.0E-101	U110714	NT	Homo sapiens SEC14 (S. cerevisiae) like 2 (SEC14L2), mRNA
671	10055	20422	1.16	1.0E-101	AB007915.2	NT	Homo sapiens mRNA for KIAA0446 protein, partial cds
688	10821	20447	4.45	1.0E-101	U110734	NT	Homo sapiens ventral anterior homeobox 2 (VAX2), mRNA
688	10821	20448	4.45	1.0E-101	U110734	NT	Homo sapiens ventral anterior homeobox 2 (VAX2), mRNA
754	10894	20521	1.32	1.0E-101	U057454	NT	Homo sapiens phosphatidylinositol 3-kinase (PI3K) containing BRCT domain (PES1), mRNA
835	10702	20612	1.28	1.0E-101	U050914	NT	Homo sapiens phosphatidylinositol 3-kinase (PI3K) containing BRCT domain (PES1), mRNA
908	10832	20679	3.44	1.0E-101	U20636.1	NT	phosphoribosylamidoimidazole synthetase (GART) mRNA
908	10832	20679	3.44	1.0E-101	U20636.1	NT	Homo sapiens cardiac alpha-myosin heavy chain gene
909	10852	20741	12.74	1.0E-101	U1681218.1	EST_HUMAN	80215947F1 NIH IMGC_R3 Homo sapiens cDNA clone IMAGE4207201 5'
1036	10954	20796	1.63	1.0E-101	A1231678.1	EST_HUMAN	igfbp900.v1 Soares, NPL, T, GBC, S1 Homo sapiens cDNA clone IMAGE1843306 3'
1712	11673	21483	0.87	1.0E-101	U092183	NT	Homo sapiens KIAA0559 gene product (KIAA0559), mRNA
1712	11673	21484	0.87	1.0E-101	U092183	NT	Homo sapiens KIAA0559 gene product (KIAA0559), mRNA
1901	11702	21677	1.62	1.0E-101	U050996	NT	Homo sapiens carboxypeptidase A1 (pancreatic) (CPA1) mRNA
2010	11702	21702	1.6	1.0E-101	EE843070.1	EST_HUMAN	Homo sapiens carboxypeptidase A1 (pancreatic) (CPA1) mRNA
2301	12218	22080	1.69	1.0E-101	U050996	NT	Homo sapiens A kinase (PRKA) anchor protein 6 (AKAP6), mRNA
2372	12433	22335	4.4	1.0E-101	X72903.1	NT	Homo sapiens EWS gene, exon 5
2714	12676	22468	2.56	1.0E-101	A033744.1	NT	Homo sapiens RIBU1 gene (partial), exon 12
2714	12676	22466	2.56	1.0E-101	A033744.1	NT	Homo sapiens RIBU1 gene (partial), exon 12
2825	12852		13.14	1.0E-101	A026232.1	NT	Homo sapiens genomic downlinker Rhesus box
3167	13052	22607	2.51	1.0E-101	U050996	NT	Homo sapiens gamma-glutamyltransferase 1 (GGT1) mRNA

Table 4

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar Database BLAST E Value	Top Hit Accession No.	Top Hit Source	Top Hit Descriptor
3203	13127		2.16	1.0E-101	BF035327.1	EST_HUMAN	601468531F1 NIH_MGC_06 Homo sapiens cDNA clone IMAGE:3802045 5'
3334	13254	23059	1.07	1.0E-101	AW065556.1	EST_HUMAN	EST137628 IMAGE resequencing, MAGI Homo sapiens cDNA
3354	12976	22468	1.76	1.0E-101	AJ23744.1	NT	Homo sapiens RIBIR gene (partial), exon 12
3354	12976	22469	1.76	1.0E-101	AJ23744.1	NT	Homo sapiens RIBIR gene (partial), exon 12
3800	13712	23169	4.83	1.0E-101	AB022785.1	NT	Homo sapiens ASH2L gene, complete cds, similar to Drosophila ash2 gene
4665	14840	24609	1.87	1.0E-101	59214630	NT	Homo sapiens butyrophilin, subfamily 2, member A1 (BTN2A1), mRNA
4665	14840	24610	1.87	1.0E-101	59214630	NT	Homo sapiens butyrophilin, subfamily 2, member A1 (BTN2A1), mRNA
5257	16779	24954	1.4	1.0E-101	AW065139.1	EST_HUMAN	EST137212 IMAGE resequencing, MAGI Homo sapiens cDNA
5591	15563	25558	3.73	1.0E-101	7427512	NT	Homo sapiens cycloleucine linker 2 (CYLN2), mRNA
5591	15563	25559	3.73	1.0E-101	7427512	NT	Homo sapiens cycloleucine linker 2 (CYLN2), mRNA
6333	16168	26569	4.16	1.0E-101	AF038970.1	NT	Homo sapiens Kruppel-type zinc finger protein (PEG3) mRNA, alternative splice form 4, partial cds
6333	16168	26567	4.16	1.0E-101	AF038970.1	NT	Homo sapiens Kruppel-type zinc finger protein (PEG3) mRNA, alternative splice form 4, partial cds
8416	16728	26441	6.03	1.0E-101	AW002476.1	EST_HUMAN	W55613.2 NCJ CGAP, Cca1 Homo sapiens cDNA clone IMAGE:2553487 3'
8471	16303		1.56	1.0E-101	BE037364.1	EST_HUMAN	60110921F1 NIH_MGC_18 Homo sapiens cDNA clone IMAGE:3349807 3'
8544	18023	23881	5.3	1.0E-101	BF030750.1	EST_HUMAN	RC1-870313-2207003016112 BT013 Homo sapiens cDNA
8693	16673	26764	2.68	1.0E-101	BF02714.1	EST_HUMAN	01764689F1 NIH_MGC_53 Homo sapiens cDNA clone IMAGE:399587 5'
7206	17038	27774	1.15	1.0E-101	AA036800.1	EST_HUMAN	Z22905.1 Soares, pregnant, uterus, Nbrp1p Homo sapiens cDNA clone IMAGE:471958 5' similar to
7448	16458	26560	16.52	1.0E-101	X60069.1	NT	PIR-S4640 S4640 170535.03c protein - yeast;
7448	16458	26561	16.52	1.0E-101	X60069.1	NT	Human mRNA for pancreatic gamma-glutamyltransferase
7454	17263	27468	18.4	1.0E-101	9845492	NT	Human mRNA for pancreatic gamma-glutamyltransferase
7623	17374	27694	5.64	1.0E-101	BE019867.1	EST_HUMAN	Homo sapiens gamma-glutamyltransferase 1 (GGT1), transcript variant 3, mRNA
7623	17474	27695	5.64	1.0E-101	BE019867.1	EST_HUMAN	001472602F1 NIH_MGC_06 Homo sapiens cDNA clone IMAGE:3879593 3'
7950	17600	29540	1.76	1.0E-101	11429127	NT	001472602F1 NIH_MGC_06 Homo sapiens cDNA clone IMAGE:3879593 3'
8262	18132	28381	2.88	1.0E-101	X38327.1	NT	Human endopeptidase complex E1, alpha subunit [human, Genomic, 195 nt, segment 8 of 9]
8454	18327	28586	1.78	1.0E-101	AB020626.1	EST_HUMAN	Human sapiens mRNA for KIAA0819 protein, partial cds
9610	19189		11.62	1.0E-101	AW030051.1	EST_HUMAN	QV1-170065-240200-065-401 DT0058 Homo sapiens cDNA
338	10297	20111	3.24	1.0E-102	AL163303.2	NT	Homo sapiens chromosome 21 segment HS21C103
604	10540	20350	0.86	1.0E-102	BE02430.2	EST_HUMAN	001106252F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3344326 5'
785	10688	20326	1.45	1.0E-102	4857634	NT	Homo sapiens down-regulated in adenoma (DRA) mRNA
1101	11017	20850	1.95	1.0E-102	M10976.1	NT	Human endopeptidase (retroviral DNA (4-)), complete retroviral segment
1247	11154	21002	1.39	1.0E-102	11437146	NT	Homo sapiens solute carrier family 2 (facilitated glucose transporter), member 9 (SLC2A9), mRNA
1247	11154	21003	1.39	1.0E-102	11437146	NT	Homo sapiens solute carrier family 2 (facilitated glucose transporter), member 9 (SLC2A9), mRNA

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Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) HH BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1396	11003	21162	90.24	1.0E-102	BE008447.1	EST_HUMAN	6615906892F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:392901 5'
2261	12145	22044	1.34	1.0E-102	A124969.1	EST_HUMAN	smf0c10.11 Johnson frontal cortex Homo sapiens cDNA clone IMAGE:1539954 3' similar to SW-G096_HUMAN Q08379 GOLGN-96.
2261	12145	22045	1.34	1.0E-102	A124969.1	EST_HUMAN	smf0c10.11 Johnson frontal cortex Homo sapiens cDNA clone IMAGE:1539954 3' similar to SW-G096_HUMAN Q08379 GOLGN-96.
3026	12954	22747	1.51	1.0E-102	7691979	NT	Homo sapiens KIAA07187 gene product (KIAA07187), mRNA
3064	13021	22819	5.61	1.0E-102	AU141005.1	EST_HUMAN	AU141005 PLACE4 Homo sapiens cDNA clone IMAGE:400650 5'
3094	13021	22819	5.91	1.0E-102	AU141005.1	EST_HUMAN	AU141005 PLACE4 Homo sapiens cDNA clone IMAGE:400650 5'
4139	14039	23814	1.40	1.0E-102	AL103207.2	NT	Homo sapiens chromosome 21 segment HS21C007
4314	14211	23994	2.11	1.0E-102	BE265310.1	EST_HUMAN	601107843F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3343842 5'
5063	14633	24705	1.09	1.0E-102	R64688.1	EST_HUMAN	X63204.1 Soares placenta N23HP Homo sapiens cDNA clone IMAGE:40634 5'
5300	15221	25023	1.89	1.0E-102	AF067133.1	NT	Homo sapiens protein phosphatase-1 regulatory subunit 7 (PPP1R7) gene, exon 7
5515	15433		7.27	1.0E-102	AB034951.1	NT	Homo sapiens HSC54 mRNA for heat shock cognate protein 54, complete cds
5538	15453	25522	3.46	1.0E-102	7705398	NT	Homo sapiens histone desphalase 7 (HDA27), mRNA
5538	15453	25523	3.46	1.0E-102	7705398	NT	Homo sapiens histone desphalase 7 (HDA27), mRNA
5800	16706	25819	2.54	1.0E-102	AI49625.1	EST_HUMAN	af3909.17 Saccharomyces cerevisiae HPL187 Homo sapiens cDNA clone IMAGE:2151785 3' similar to TRQ13197
6351	16214	25370	6.90	1.0E-102	AJ26954.1	NT	Q13137 NDP82.1
6495	16554	26524	2.53	1.0E-102	AV10738.1	EST_HUMAN	Homo sapiens mRNA for Centaurin-alpha2 protein
6737	16966	26957	4.2	1.0E-102	BE163061.1	EST_HUMAN	AY167135 Clt Homo sapiens cDNA clone IMAGE:3903145 5'
6832	16711	26904	2.83	1.0E-102	BE163061.1	EST_HUMAN	QY3-N1025-210500-236-N03 NT0028 Homo sapiens cDNA
6845	16823	27074	1.36	1.0E-102	AV09487.1	EST_HUMAN	Q10180107F1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3903145 5'
6845	16823	27075	1.36	1.0E-102	AV09487.1	EST_HUMAN	AV094871 GKX Homo sapiens cDNA clone IMAGE:3903145 5'
7001	16975	27069	4.00	1.0E-102	AB007623.1	NT	Homo sapiens mRNA for KIAA054 protein, partial cds
7374	17243	27448	1.52	1.0E-102	IT70363.1	EST_HUMAN	Y13407.1 Soares fetal liver spiken NF1S Homo sapiens cDNA clone IMAGE:67021 5'
7374	17243	27448	1.52	1.0E-102	IT70363.1	EST_HUMAN	Y13407.1 Soares fetal liver spiken NF1S Homo sapiens cDNA clone IMAGE:67021 5'
7415	17282	27460	3.99	1.0E-102	AU124029.1	EST_HUMAN	AU124029 NT29M4 Homo sapiens cDNA clone NT29M400399 5'
7961	17811	28062	2.03	1.0E-102	11428-430	NT	Homo sapiens myosin (M-protein) 2 (195K) (MYO12), mRNA
7961	17811	28063	2.03	1.0E-102	11428-430	NT	Homo sapiens myosin (M-protein) 2 (195K) (MYO12), mRNA
7981	17931	28070	2.9	1.0E-102	AB050307.1	EST_HUMAN	RC-BT074-290469-014 BT074 Homo sapiens cDNA
7981	17931	28071	2.9	1.0E-102	AB050307.1	EST_HUMAN	RC-BT074-290469-014 BT074 Homo sapiens cDNA
8005	17955	28096	2.3	1.0E-102	AA070786.1	EST_HUMAN	on67904.1 Soares, NFL_1, GGC, S1 Homo sapiens cDNA clone IMAGE:1560823 3' similar to SW-CAV2_HUMAN PF1636 CAVEOLIN-2 [1].
8421	18265	28549	2.38	1.0E-102	B5397468.1	EST_HUMAN	601143992F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:392166 5'

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Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8424	18298	28653	1.96	1.0E-102	4507822	NT	Homo sapiens UDP glycosyltransferase 2 family, polypeptide B11 (UGT2B11) mRNA
8424	18298	28654	1.96	1.0E-102	4507822	NT	Homo sapiens UDP glycosyltransferase 2 family, polypeptide B11 (UGT2B11) mRNA
8703	18325	28807	2.76	1.0E-102	BF350243.1	EST_HUMAN	ROS-ET10072-10600-011-P01 ET100722 Homo sapiens cDNA
8847	18755	28051	4.04	1.0E-102	U41302.1	NT	Human chromosome 16 centromere (SLC6A6) and (CCM) paralogous genes, complete cds
9054	18837	28252	2.82	1.0E-102	AL163260.2	NT	Homo sapiens chromosome 21 segment HS21C080
9054	18837	28252	4.77	1.0E-102	AF300862.1	EST_HUMAN	X07C12.1 NCI CGAP Co20 Homo sapiens cDNA clone IMAGE:2860338 3'
93	10049	15891	0.82	1.0E-103	BE009158.1	EST_HUMAN	601500409FT NIH MGSC_70 Homo sapiens cDNA clone IMAGE:3902305 5'
93	10049	15892	0.82	1.0E-103	BE009158.1	EST_HUMAN	601500409FT NIH MGSC_70 Homo sapiens cDNA clone IMAGE:3902305 5'
93	10078	19994	8.1	1.0E-103	D60782.2	NT	Homo sapiens mRNA for KIA0235 protein, partial cds
201	10173	19990	0.83	1.0E-103	6483708	NT	Homo sapiens nuclear protein (KIE/D repeat) (NOP56) mRNA
865	10888	20734	1.01	1.0E-103	AI278348.1	EST_HUMAN	601485388FT NIH MGSC_69 Homo sapiens cDNA clone IMAGE:3837876 5'
1223	11311	20965	7.26	1.0E-103	BE071541.1	NT	601485388FT NIH MGSC_69 Homo sapiens cDNA clone IMAGE:3837876 5'
1578	11482	21442	2.32	1.0E-103	AF112872.1	NT	Homo sapiens phosphatidylinositol 4-kinase 230 (pik4230) mRNA, complete cds
1872	11765	21643	1.04	1.0E-103	7657492	NT	Homo sapiens long GUS-ASSOCIATED PROTEIN (SMAP) mRNA
1932	11927	21703	1.27	1.0E-103	4502428	NT	Homo sapiens bone morphogenetic protein 8 (osteogenic protein 2) (BMP8) mRNA
1932	11927	21703	1.27	1.0E-103	4502428	NT	Homo sapiens bone morphogenetic protein 8 (osteogenic protein 2) (BMP8) mRNA
2257	12141	22940	1.57	1.0E-103	AU134891.1	EST_HUMAN	AU134891 PLACEI Homo sapiens cDNA clone PLACE100965 3'
2401	12276	22173	2.22	1.0E-103	AF060568.1	NT	Homo sapiens promyelocyte leukemia zinc finger protein (PLZF) gene, complete cds
2578	12449	22240	0.86	1.0E-103	N92770.1	EST_HUMAN	X061408.1 Soares, placenta, 86weeks, 2NHP1605W Homo sapiens cDNA clone IMAGE:295999 3'
3030	12598	22458	2.43	1.0E-103	BE74722.1	EST_HUMAN	601571311FT NIH MGSC_9 Homo sapiens cDNA clone IMAGE:3834315 5'
3333	13253	23056	3.44	1.0E-103	AW208246.1	EST_HUMAN	UHH-BWMO-qlh11-H-U-Mat NCI CGAP Sib6 Homo sapiens cDNA clone IMAGE:2783105 3'
3393	13310	23108	1.09	1.0E-103	AB040662.1	NT	Homo sapiens mRNA for KIA11459 protein, partial cds
3695	13606		2.41	1.0E-103	AF023861.1	NT	Musca domestica cydophyllin A mRNA, complete cds
3725	13637	23423	1.10	1.0E-103	AA485065.1	EST_HUMAN	af100124.1 Stratagene lung (R937210) Homo sapiens cDNA clone IMAGE:840407 3' similar to combine element LTR 10 negative element ;
3757	13670	23454	1.39	1.0E-103	11430876	NT	Homo sapiens neurexin 1 (NRP1), mRNA
3922	13831	23911	3.02	1.0E-103	U72663.1	EST_HUMAN	seq4340 b4HEB33A-Cct1064-10 Bio Homo sapiens cDNA clone b4-HEB3A-Cct1064-10 Bio-7 3'
5919	15534	25919	1.72	1.0E-103	AF176995.1	NT	Homo sapiens septin 2 (SEPT2) mRNA, partial cds
5988	15903	26027	5.37	1.0E-103	AF034460.1	NT	Homo sapiens glycine receptor subunit 2 subunit (GLRA2) gene, exon 4
8033	15936	26060	1.88	1.0E-103	AI590071.1	EST_HUMAN	tm58005.1 NCI CGAP Bm25 Homo sapiens cDNA clone IMAGE:2192280 3' similar to TRQ13789 Q13789 ANONYMOUS ;

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) HT BLAST E Value	Top HT Accession No.	Top HT Database Source	Top HT Descriptor
6033	13636	26070	1.08	1.0E-103	A590071.1	EST_HUMAN	tn58b05.v1 NCI CGAP_Bm25 Homo sapiens cDNA clone IMAGE:2162289 3' similar to TR.Q13769 Q13769 ANONYMOUS ;
6092	15102	24679	1.06	1.0E-103	5032292	NT	Homo sapiens dyshaptin (muscular dystrophy, Duchenne and Becker types), includes DXS142, DXS164, DXS206, DXS230, DXS289, DXS299, DXS270, DXS272 (DMD), transcript variant Dp427m, mRNA
6092	15102	24679	1.06	1.0E-103	5032292	NT	Homo sapiens dyshaptin (muscular dystrophy, Duchenne and Becker types), includes DXS142, DXS164, DXS206, DXS230, DXS289, DXS299, DXS270, DXS272 (DMD), transcript variant Dp427m, mRNA
6092	15102	24679	1.06	1.0E-103	5032292	NT	Homo sapiens dyshaptin (muscular dystrophy, Duchenne and Becker types), includes DXS142, DXS164, DXS206, DXS230, DXS289, DXS299, DXS270, DXS272 (DMD), transcript variant Dp427m, mRNA
6338	10201	20361	3.21	1.0E-103	BE748156.1	EST_HUMAN	60171537.1 NIH MGAP_35 Homo sapiens cDNA clone IMAGE:3839545 5' Q13769 ANONYMOUS ;
6589	16426	29907	3.28	1.0E-103	A590071.1	EST_HUMAN	tn58b05.v1 NCI CGAP_Bm25 Homo sapiens cDNA clone IMAGE:2162289 3' similar to TR.Q13769 Q13769 ANONYMOUS ;
6598	16426	29908	3.28	1.0E-103	A590071.1	EST_HUMAN	tn58b05.v1 NCI CGAP_Bm25 Homo sapiens cDNA clone IMAGE:2162289 3' similar to TR.Q13769 Q13769 ANONYMOUS ;
6523	16702	26903	2.96	1.0E-103	T31090.1	EST_HUMAN	EST127193 Human Brain Homo sapiens cDNA 5' end similar to None
7010	16887	27079	1.17	1.0E-103	AU140344.1	EST_HUMAN	AU140344 PLACE2 Homo sapiens cDNA clone IMAGE:2003374 5'
7010	16887	27080	1.17	1.0E-103	AU140344.1	EST_HUMAN	AU140344 PLACE2 Homo sapiens cDNA clone IMAGE:2003374 5'
7050	16927	27119	1.43	1.0E-103	BF10244.1	EST_HUMAN	706205.1 Soares NSF F8_9W OT PA_P S1 Homo sapiens cDNA clone IMAGE:3525694 3' similar to SWPTNE HUMAN Q16025 PROTEIN-TYROSINE PHOSPHATASE D1 ;
7287	17144	27337	3.08	1.0E-103	6036221	NT	Homo sapiens triple functional domain (PTPRF interacting) (TRIO) mRNA
7287	17144	27338	3.08	1.0E-103	6036221	NT	Homo sapiens triple functional domain (PTPRF interacting) (TRIO) mRNA
7287	17327	27570	2.02	1.0E-103	Z33976.1	NT	Homo sapiens mRNA for latent transforming growth factor-beta binding protein (LTBP-2)
7615	17695	27605	2.08	1.0E-103	AW063076.1	EST_HUMAN	EST1315749 MACH-2 ressequencing, MACH-2 Homo sapiens cDNA
7678	17728	27972	9.93	1.0E-103	A878966.1	EST_HUMAN	ga01g04.Yi Schröder field brain 00004 Homo sapiens cDNA clone IMAGE:2618326 5' similar to TR.Q16046 01-046 KIA0368 ;
8115	18004	28290	3.08	1.0E-103	A7922759.1	EST_HUMAN	cd02005.v1 NCI CGAP_Luf Homo sapiens cDNA clone IMAGE:1522289 5' similar to TR.Q02094 Q02094 PHOSPHOLIPASE C NEIGHBORING ;
8218	18101	28353	2.74	1.0E-103	AF149773.1	NT	Homo sapiens NOD1 protein (NOD1) gene, exons 1, 2, and 3
8218	18101	28354	2.74	1.0E-103	AF149773.1	NT	Homo sapiens NOD1 protein (NOD1) gene, exons 1, 2, and 3
8881	18960	28932	2.89	1.0E-103	AU136283.1	EST_HUMAN	AU136283 PLACE1 Homo sapiens cDNA clone IMAGE:1036923 5'
8743	17892	28136	6.46	1.0E-103	L43910.1	NT	Homo sapiens polyoic kidney discosa (PMD1) gene, exons 27-30
8973	18778	29070	3.42	1.0E-103	BE644611.1	EST_HUMAN	76d8a10.Yi Soares NSF F8_9W OT PA_P S1 Homo sapiens cDNA clone IMAGE:3287610 3' similar to contains MEF2B.13 MEF2B negative element ;



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Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) HIT BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6040	18833		1.72	1.0E-103	AF224650.1	NT	Homo sapiens mannosidase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2D 3 (UBE2D) genes, complete cds
6079	18855		2.95	1.0E-103	11626291	NT	Homo sapiens hypothetical protein FLJ20454 (FLJ20454), mRNA
9275	18979	28323	2.21	1.0E-103	AB011390.1	EST	Homo sapiens gene for AF-6, complete cds
233	10202	20076	2.6	1.0E-104	AL037949.3	EST_HUMAN	DKFZ3564H1072.J1 594 (synonym: hlb2) Homo sapiens cDNA clone DKFZ3564H1072 5'
233	10202	20077	2.6	1.0E-104	AL037949.3	EST_HUMAN	DKFZ3564H1072.J1 594 (synonym: hlb2) Homo sapiens cDNA clone DKFZ3564H1072 5'
1845	11741	21677	1.81	1.0E-104	4502428	EST	Homo sapiens bone morphogenetic protein 6 (osteogenic protein 2) (BMP6) mRNA
2147	12035	21932	7.16	1.0E-104	AA193075.1	EST_HUMAN	z02206.6.t1 Stralagene cdon (z037204) Homo sapiens cDNA clone IMAGE-587628 3' similar to
2157	12044	21934	1.91	1.0E-104	AA193075.1	EST_HUMAN	g01577460.F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE-3028438 5'
2316	12190	22097	1.15	1.0E-104	BF524221.1	EST_HUMAN	RC1-GT0249-110906-71412 GT0249 Homo sapiens cDNA
2316	12190	22098	1.16	1.0E-104	BF524221.1	EST_HUMAN	RC1-GT0249-110906-71412 GT0249 Homo sapiens cDNA
2387	12253	22156	1.95	1.0E-104	5831570	NT	Homo sapiens AERP2 (collagen-related protein 2, yeast) homolog (AOTR2), mRNA
2842	12770	22556	7.84	1.0E-104	MB4671.1	NT	Human lymphocyte antigen G5B9A1E143 mRNA, complete cds
2898	12813		2.82	1.0E-104	Y111151.1	NT	Human gene encoding phenylpyruvate tautomerase II
3345	13255		1.54	1.0E-104	AA319498.1	EST_HUMAN	EST 21058 Adrenal gland tumor Homo sapiens cDNA 5' end
3950	13465	23260	0.95	1.0E-104	AB033102.1	NT	Homo sapiens mRNA for KAA1270 protein, partial cds
3950	13465	23261	0.95	1.0E-104	AB033102.1	NT	Homo sapiens mRNA for KAA1270 protein, partial cds
3891	13772	23594	0.91	1.0E-104	AB032968.1	NT	Homo sapiens mRNA for KAA1172 protein, partial cds
4280	14778	23657	4.28	1.0E-104	X02761.1	NT	Human mRNA for fibronectin (FN precursor)
4504	14357	24182	0.9	1.0E-104	AF231020.1	NT	Homo sapiens chromosome 21 unknown mRNA
4504	14357	24183	0.9	1.0E-104	AF231020.1	NT	Homo sapiens chromosome 21 unknown mRNA
5577	15532	25675	1.33	1.0E-104	U43379.1	NT	Human Down Syndrome region of chromosome 21 DNA
5577	15532	25676	1.33	1.0E-104	U43379.1	NT	Human Down Syndrome region of chromosome 21 DNA
5591	15797	25919	8.46	1.0E-104	AF17687.1	EST_HUMAN	wf03512.x1 NCL CGAP_Kid12 Homo sapiens cDNA clone IMAGE-2401727 3' similar to TR-Q14145 Q14145
5591	15797	25920	8.46	1.0E-104	AF17687.1	EST_HUMAN	wf03512.x1 NCL CGAP_Kid12 Homo sapiens cDNA clone IMAGE-2401727 3' similar to TR-Q14145 Q14145
6073	16056	28204	1.52	1.0E-104	BE31482.1	EST_HUMAN	KAA0132 PROTEIN, contains element LTR7 repetitive element ;
6073	16056	28205	1.52	1.0E-104	BE31482.1	EST_HUMAN	KAA0132 PROTEIN, contains element LTR7 repetitive element ;
6293	16132	33509	2.98	1.0E-104	11428572	EST_HUMAN	601150451.F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE-3503220 5'
7283	17164	27353	2.24	1.0E-104	BF44820.1	EST_HUMAN	601150451.F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE-3503220 5'
7370	17239	27442	4.55	1.0E-104	AF081365.1	NT	Homo sapiens adaptor-related protein complex 2, beta 1 subunit (AP2B1), mRNA
7370	17239	27443	4.55	1.0E-104	AF091956.1	NT	Homo sapiens Tfo uniform mRNA, complete cds



Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6864	16773	28607	1.9	1.0E-105	AW007194.1	EST_HUMAN	wa50t0c.1 NCI CGAP_Bln26 Homo sapiens cDNA clone IMAGE:2600629 3' similar to SW-AOSA_FENCH F30393 ACETYL-COENZYME A SYNTHETASE ;
7234	17111	27304	2.96	1.0E-105	AW016878.1	EST_HUMAN	UHH-B10p-actb-12-QJ.1 NCI CGAP_Sub2 Homo sapiens cDNA clone IMAGE:2711782 3'
8303	18181	28428	5.44	1.0E-105	AF354622.1	NT	Homo sapiens SMARCA4 isoform (SMARCA4) gene, complete cds, alternatively spliced
8360	18430	28659	1.8	1.0E-105	D63548.1	NT	Homo sapiens COL4A3 gene for $\alpha 5(IV)$ collagen, exon 31
8602	18469	28740	2.06	1.0E-105	77063036	NT	Homo sapiens Ran binding protein 11 (LOC51194), mRNA
8867	18679	28668	2.01	1.0E-105	AW027554.1	EST_HUMAN	wv7407.x1 Soxnes_flymus_NHFFn Homo sapiens cDNA clone IMAGE:2634501 3' similar to TRP87862 F87862 PROTEASE ;
1451	10119		0.90	1.0E-105	AW 502208.1	EST_HUMAN	UJHF-BNO-ak-p07-QJ.1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3078348 5'
1965	10170	19897	1.54	1.0E-105	AI695055.1	EST_HUMAN	UT76021.X1 NCI CGAP_UH1 Homo sapiens cDNA clone IMAGE:2215009 3'
531	10473	20286	1.77	1.0E-105	AW065566.1	EST_HUMAN	ES137625 NCI CGAP_UH1 Homo sapiens cDNA clone IMAGE:3078348 5'
590	10527	20334	0.79	1.0E-105	U00146.1	NT	Human dihydrofolate reductase pseudogene (pat-bd1)
590	10527	20334	1.21	1.0E-105	U00146.1	NT	Human dihydrofolate reductase pseudogene (pat-bd1)
1508	11413	21272	2.66	1.0E-105	AF45712.1	NT	Homo sapiens soluble osteocalcin-1 mRNA, complete cds
1674	11579	21444	4.91	1.0E-105	U48724.1	EST_HUMAN	Human epidermal growth factor receptor (EGFR) precursor-mRNA, exon 4, partial cds
1762	11681	21533	5.12	1.0E-105	AA527446.1	EST_HUMAN	U941c05.x1 NCI CGAP_C03 Homo sapiens cDNA clone IMAGE:637552 3' similar to contains element LTR3 negative element ;
1782	11681	21534	5.12	1.0E-105	AA527446.1	EST_HUMAN	U941c05.x1 NCI CGAP_C03 Homo sapiens cDNA clone IMAGE:637552 3' similar to contains element LTR3 negative element ;
2075	11658	21569	1.08	1.0E-105	BE144266.1	EST_HUMAN	MRO-H10165-16230-006-410 HT1080 Homo sapiens cDNA
2268	12133	22652	8.39	1.0E-105	4504194	NT	Homo sapiens glutathione S-transferase theta 1 (GSTT1), mRNA
2468	12333	22729	1.63	1.0E-105	AF03528.1	NT	Homo sapiens X-linked and/or ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
2567	12529	22523	1.25	1.0E-105	U06675.2	NT	Homo sapiens sperm membrane protein BS 83 mRNA, complete cds
2589	12631	22524	1.94	1.0E-105	BE06201.1	EST_HUMAN	001149788F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:3902491 5'
2728	12691	22467	4.23	1.0E-105	AF276028.1	EST_HUMAN	GT971010.x1 Soxnes_NHMPV_S1 Homo sapiens cDNA clone IMAGE:1878307 3'
2795	11319	21163	2.97	1.0E-105	4504194	NT	Homo sapiens glutathione S-transferase theta 1 (GSTT1), mRNA
2795	11319	21164	2.97	1.0E-105	4504194	NT	Homo sapiens glutathione S-transferase theta 1 (GSTT1), mRNA
2911	12837	22535	5.01	1.0E-105	AB037147.1	NT	Homo sapiens mRNA for KIAA1328 protein, partial cds
2911	12837	22536	5.01	1.0E-105	AB037147.1	NT	Homo sapiens mRNA for KIAA1328 protein, partial cds
3143	13069	22867	2.36	1.0E-105	8622305	NT	Homo sapiens hypothetical protein FLJ11273 (FJ11273), mRNA
3143	13069	22867	2.36	1.0E-105	8622305	NT	Homo sapiens hypothetical protein FLJ11273 (FJ11273), mRNA
3328	13248	23093	0.8	1.0E-105	AB006881.1	NT	Homo sapiens gene for activin receptor type IIB, complete cds
3384	13311	23105	0.68	1.0E-105	AB033104.1	NT	Homo sapiens mRNA for KIAA1278 protein, partial cds

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Description
3394	13311	23110	0.08	1.0E-106	AB030104.1	NT	Homo sapiens mRNA for KIAA1278 protein, partial cds
3952	13860	23934	7.22	1.0E-106	AW974690.1	EST_HUMAN	EST1386975 IMAGE (resequences, MAGN) Homo sapiens cDNA
3952	13860	23934	7.22	1.0E-106	AW974690.1	EST_HUMAN	EST1386975 IMAGE (resequences, MAGN) Homo sapiens cDNA
4487	14391	24176	1.21	1.0E-106	BE144288.1	EST_HUMAN	MRO-HITD165-140200-008-410 HTD165 Homo sapiens cDNA
4913	15047		1.21	1.0E-106	L11844.1	NT	Homo sapiens dystrophin gene, exon 41
5298	15219	25022	2.98	1.0E-106	AA781155.1	EST_HUMAN	424609.at Sources, testis, NHT Homo sapiens cDNA clone 1301225 3' similar to gb:U12433 PROTEIN
6711	15619	25722	6.78	1.0E-106	BF679574.1	EST_HUMAN	PHPS-2 (HUMAN);
5900	15772	25931	16.4	1.0E-106	BF679574.1	EST_HUMAN	602154012FT NIH MGSC_83 Homo sapiens cDNA clone IMAGE:4295007 5'
5906	15772	25932	16.4	1.0E-106	11543913	NT	Homo sapiens xylorhaminase II (XT2), mRNA
6361	16224	26395	5.59	1.0E-106	AA693779.1	EST_HUMAN	ae72607.at Streptococcus solis brain S11 Homo sapiens cDNA clone IMAGE:969732 3' similar to gb:X65873
6360	16252	26412	4.83	1.0E-106	11429817	NT	KINESIN HEAVY CHAIN (HUMAN);
6431	16292	26453	1.35	1.0E-106	BE297223.1	EST_HUMAN	Homo sapiens XPAC23 protein (LOC57109), mRNA
6490	16348	26517	7.0	1.0E-106	11425503	NT	601105739FT NIH MGSC_15 Homo sapiens cDNA clone IMAGE:3988345 5'
6490	16348	26519	7.0	1.0E-106	11425503	NT	Homo sapiens scfing toxin 11 (SNX11), mRNA
6657	16537	26713	5.33	1.0E-106	BE741408.1	EST_HUMAN	Homo sapiens scfing toxin 11 (SNX11), mRNA
6657	16537	26713	5.33	1.0E-106	BE741408.1	EST_HUMAN	601594331FT NIH MGSC_9 Homo sapiens cDNA clone IMAGE:3049453 5'
6657	16537	26714	5.33	1.0E-106	BE741408.1	EST_HUMAN	601594331FT NIH MGSC_9 Homo sapiens cDNA clone IMAGE:3049453 5'
6754	16633	26921	1.48	1.0E-106	AS52008.1	EST_HUMAN	606607.XT Bacterial and HPLC60 Homo sapiens cDNA clone IMAGE:217732 3' similar to gb:X06223
7052	16629	27120	3.16	1.0E-106	AB54423.1	EST_HUMAN	CALCOPULIN B (HUMAN);
7281	17158	27553	1.86	1.0E-106	AA25307.1	EST_HUMAN	192605.XT NCL CGAP_146T1 Homo sapiens cDNA clone IMAGE:2265832 3' similar to SW:ICAG_HUMAN
7281	17158	27554	1.86	1.0E-106	AA25307.1	EST_HUMAN	Q08048.XT NCL CGAP_146T1 Homo sapiens cDNA clone IMAGE:2265832 3' similar to SW:ICAG_HUMAN
7351	17219	27419	2.76	1.0E-106	AT750447.1	EST_HUMAN	Q08048.XT NCL CGAP_146T1 Homo sapiens cDNA clone IMAGE:2265832 3' similar to SW:ICAG_HUMAN
7424	17291	27501	1.86	1.0E-106	AA759068.1	EST_HUMAN	Q08048.XT NCL CGAP_146T1 Homo sapiens cDNA clone IMAGE:2265832 3' similar to SW:ICAG_HUMAN
7424	17291	27502	1.86	1.0E-106	AA759068.1	EST_HUMAN	Q08048.XT NCL CGAP_146T1 Homo sapiens cDNA clone IMAGE:2265832 3' similar to SW:ICAG_HUMAN
7803	17653	27890	1.32	1.0E-106	BF027310.1	EST_HUMAN	Q08048.XT NCL CGAP_146T1 Homo sapiens cDNA clone IMAGE:2265832 3' similar to SW:ICAG_HUMAN
7803	17653	27891	1.32	1.0E-106	BF027310.1	EST_HUMAN	Q08048.XT NCL CGAP_146T1 Homo sapiens cDNA clone IMAGE:2265832 3' similar to SW:ICAG_HUMAN
7890	17730	27975	5.83	1.0E-106	AA004417.1	EST_HUMAN	Q08048.XT NCL CGAP_146T1 Homo sapiens cDNA clone IMAGE:2265832 3' similar to SW:ICAG_HUMAN
7890	17730	27976	5.83	1.0E-106	AA004417.1	EST_HUMAN	Q08048.XT NCL CGAP_146T1 Homo sapiens cDNA clone IMAGE:2265832 3' similar to SW:ICAG_HUMAN

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## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7801	17751	27990	1.66	1.0E-106	AW363299.1	EST_HUMAN	RCB-CT0318-201199-031-a11 CT0318 Homo sapiens cDNA
8019	17869	28113	3.06	1.0E-106	AF163202.2	NT	Human chromosome 21 segment HS21C002
8289	18149	28389	5.21	1.0E-106	BF032755.1	EST_HUMAN	601435461F1 NIH_MGC_60 Homo sapiens cDNA clone IMAGE:3857368 5'
8290	18149	28390	5.21	1.0E-106	BF032755.1	EST_HUMAN	601435461F1 NIH_MGC_60 Homo sapiens cDNA clone IMAGE:3857368 5'
8415	18269	28544	2.28	1.0E-106	J05200.1	NT	Human tyrosine receptor mRNA, complete cds
8415	18269	28545	2.28	1.0E-106	J05200.1	NT	Human tyrosine receptor mRNA, complete cds
9122	18540	25298	2.87	1.0E-106	AW410405.1	EST_HUMAN	fl08111.x1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:2601644 5'
9342	19022	25298	2.31	1.0E-106	BE894488.1	EST_HUMAN	601433087F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3918524 5'
9342	19022	25299	2.31	1.0E-106	BE894488.1	EST_HUMAN	601433087F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3918524 5'
9554	19152	25299	5.35	1.0E-107	BE95505.1	EST_HUMAN	RC1-CT0248-090800-024-405 CT0248 Homo sapiens cDNA
234	10203		3.48	1.0E-107	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
284	10228		1.05	1.0E-107	865489.1	NT	Human IFNA1 gene for interferon alpha1 subunit receptor
506	10543		1.07	1.0E-107	4828883	NT	Homo sapiens neuronal cell adhesion molecule (NCAM) mRNA
614	10560	20361	1.7	1.0E-107	AF155103.1	NT	Homo sapiens NY-BE94-25 antigen mRNA, partial cds
798	10723	20655	0.86	1.0E-107	805446.1	NT	Homo sapiens IFNA3 gene for interferon alpha3 subunit receptor
888	10754	20644	1.16	1.0E-107	805446.1	NT	Homo sapiens IFNA3 gene for interferon alpha3 subunit receptor
893	10877	20724	10.07	1.0E-107	AF164121.1	NT	Homo sapiens sodium-dependent high-affinity diacylglycerol transporter (NADCC) mRNA, complete cds
1257	11764	21016	0.78	1.0E-107	AB032263.1	NT	Homo sapiens BAZ2B mRNA for bromodomain adjacent to zinc finger domain 1B, complete cds
1351	11458	21314	2.13	1.0E-107	BF037405.1	EST_HUMAN	GV24HT0340-120900-355-405 HT0540 Homo sapiens cDNA
1718	11619	21488	1.47	1.0E-107	AF136275.1	NT	Homo sapiens calpain 2, precursor (CTSZ) gene, exon 3
1797	11695	21571	0.96	1.0E-107	AB007822.2	NT	Homo sapiens mRNA for KIAA0493 protein, partial cds
1797	11695	21572	0.96	1.0E-107	AB007822.2	NT	Homo sapiens mRNA for KIAA0493 protein, partial cds
2161	12048	21949	1.26	1.0E-107	U131728.1	NT	Human dipeptidyl peptidase IV (CD26) gene, exon 20
2487	12362	22257	0.86	1.0E-107	BF732460.1	EST_HUMAN	601567619F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3842309 5'
2487	12362	22258	0.86	1.0E-107	BF732460.1	EST_HUMAN	601567619F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3842309 5'
2976	12903	22701	1.94	1.0E-107	AW842451.1	EST_HUMAN	PM1-CN0031-180100-001-d03 CN0031 Homo sapiens cDNA
2976	12903	22702	1.94	1.0E-107	AW842451.1	EST_HUMAN	PM1-CN0031-180100-001-d03 CN0031 Homo sapiens cDNA
3061	12988	22779	3.92	1.0E-107	5902097	NT	Homo sapiens SMIT3 (suppressor of mitf 3, yesa) homolog 2 (SMT3H2), mRNA
3764	13957	23450	2.62	1.0E-107	AF023071.1	NT	Homo sapiens myxobolam (MTM1) gene, exon 9
5675	15490	25657	3.26	1.0E-107	BE367489.1	EST_HUMAN	601442559F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3842464 5'
6356	16219	26360	1.52	1.0E-107	AW503913.1	EST_HUMAN	UHFH-BNC-38-c-28.0.U.11 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3078310 5'
6356	16219	26361	1.52	1.0E-107	AW503913.1	EST_HUMAN	UHFH-BNC-38-c-28.0.U.11 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3078310 5'
6448	16508	26471	1.63	1.0E-107	AW50578.1	EST_HUMAN	W05894.x1 NC_CGAP_Kid1 Homo sapiens cDNA clone IMAGE:2384791 3'

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### Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8067	17978	29228	2.73	1.0E-107	AF52680.1	EST_HUMAN	ig10003.x1 NCL CGAP_CLL1 Homo sapiens cDNA clone IMAGE:2100393 3' similar to SW-6201-D1C01
8316	18243	28443	1.52	1.0E-107	L49141.1	NT	P09064 NCI-ACTININ 3, NON MUSCULAR ;
8337	18204	28453	1.98	1.0E-107	BF598511.1	EST_HUMAN	Homo sapiens neurocorticotrophic-specific protein (NSP) gene, exon 4
8638	18203	28472	9.12	1.0E-107	BE54550.1	EST_HUMAN	R02123603F1 NIH_MGC_59 Homo sapiens cDNA clone IMAGE:4281039 5'
8697	17881	28179	28.72	1.0E-107	BE54550.1	EST_HUMAN	R02123603F1 NIH_MGC_59 Homo sapiens cDNA clone IMAGE:3452929 5'
8697	17881	28179	4.21	1.0E-107	11419701.NT	EST_HUMAN	Homo sapiens HSPCO49 protein (HSPCO49), mRNA
8697	17881	28123	4.21	1.0E-107	11419701.NT	EST_HUMAN	Homo sapiens HSPCO49 protein (HSPCO49), mRNA
9167	16873		3.64	1.0E-107	A0001445.1	EST_HUMAN	ze54601.13 Some retina N2b-4HR Homo sapiens cDNA clone IMAGE:301944 3' similar to contains 1HR.b1
939	10594	20711	1.45	1.0E-108	3E299042.1	EST_HUMAN	THR repeatase element ;
1244	11151	20959	1.58	1.0E-108	Y18000.1	NT	R01177018F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3532348 5'
						EST_HUMAN	Homo sapiens NF2 gene, exon 2
						EST_HUMAN	h010701 NCL CGAP_P28 Homo sapiens cDNA clone IMAGE:2246933 3' similar to gb.M14219 BONE
2262	12198	22083	7.41	1.0E-108	AF69040.1	EST_HUMAN	PROTEOLYCAN II PRECURSOR (HUMAN);
2262	12198	22084	7.41	1.0E-108	AF69040.1	EST_HUMAN	PROTEOLYCAN II PRECURSOR (HUMAN);
2378	12268	22150	7.2	1.0E-108	3E209994.1	EST_HUMAN	hb2510.x1 NIH_MGC_14 Homo sapiens cDNA clone IMAGE:2903699 3' similar to gb.X53777 60S
3238	13285	23026	0.94	1.0E-108	AF020397.1	NT	REBOSOMAL PROTEIN L28 (HUMAN); gb.D0827 Mouse thiolase mRNA, complete cds (MCUSE);
3305	13226	23026	0.94	1.0E-108	AF020397.1	NT	Homo sapiens potassium channel subunit (HERG-3) mRNA, complete cds
3305	13226	23026	0.94	1.0E-108	AF020397.1	NT	Homo sapiens potassium channel subunit (HERG-3) mRNA, complete cds
3742	13954	23437	0.92	1.0E-108	5453956.1	EST_HUMAN	Homo sapiens pericentriolar material 1 (PCOM1) mRNA
4065	23744		1.33	1.0E-108	AW58438.1	EST_HUMAN	H12a1.1 NCL CGAP_CJ11 Homo sapiens cDNA clone IMAGE:2972000 3' similar to SW-3BP1_MOUSE
4425	14320	24103	1.88	1.0E-108	U72981.1	NT	P51914 SH3-BINDING PROTEIN 3BP-1 ;
4425	14320	24107	1.89	1.0E-108	U72981.1	NT	Human hepatocyte nuclear factor 4-alpha gene, exon 2
4658	14855	24376	2.88	1.0E-108	7681979.1	NT	Human hepatocyte nuclear factor 4-alpha gene, exon 2
4998	14748	24528	2.19	1.0E-108	A000905.1	NT	Homo sapiens PSST1 gene, alternative transcript
4998	14748	24528	2.19	1.0E-108	A000905.1	NT	Homo sapiens PSST1 gene, alternative transcript
6396	15269	25120	1.83	1.0E-108	AF394064.1	EST_HUMAN	R0411037224F1 NIH_MGC_60 Homo sapiens cDNA clone IMAGE:364689 5'
6393	15312	25106	2.77	1.0E-108	BE689016.1	EST_HUMAN	R041144922F1 NIH_MGC_60 Homo sapiens cDNA clone IMAGE:364689 5'
6393	15312	25107	2.77	1.0E-108	BE689016.1	EST_HUMAN	Homo sapiens FYVE domain-containing dual specificity protein phosphatase FYVE-DSF2 mRNA, complete cds
5732	15540	25745	5.06	1.0E-108	AF204717.1	NT	Homo sapiens FYVE domain-containing dual specificity protein phosphatase FYVE-DSF2 mRNA, complete cds
5732	15540	25746	5.06	1.0E-108	AF204717.1	NT	Homo sapiens FYVE domain-containing dual specificity protein phosphatase FYVE-DSF2 mRNA, complete cds

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## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5788	15665	25904	1.37	1.0E-108	AJ133266.1	NT	Homo sapiens cawedlin-1/2 locus, Contig1, D75322, genes CAV2 (exons 1, 2a, and 2b), CAV1 (exons 1 and 2)
5247	16113	26265	5.35	1.0E-108	11431857	NT	Homo sapiens G protein-coupled receptor, family C, group 6, member B (GPCR5B), mRNA
6396	16260	26421	3.34	1.0E-108	4758333	NT	Homo sapiens delta-6 fatty acid desaturase (FADS6), mRNA
6088	16278	26471	1.83	1.0E-108	AF083900.1	NT	Homo sapiens connective tissue growth factor-like protein precursor, mRNA, complete cds
8202	15665	24891	2.77	1.0E-108	U12460.1	NT	Homo sapiens mRNA for Gq11-associated microtubule-binding protein (GMAP-210)
8593	18461	28731	4.26	1.0E-108	AW950186.1	EST_HUMAN	EST1376288 IMAGE resequencing, MAGE Homo sapiens cDNA
8677	18565		2.03	1.0E-108	11441465	NT	Homo sapiens G protein-coupled receptor 48 (GPCR48), mRNA
8705	12166	22663	4.14	1.0E-108	AI89040.1	EST_HUMAN	18910.1x1 NCL CGAP, P228 Homo sapiens cDNA, clone IMAGE:2248938 3' similar to gb.M14219 BONE
8705	12166	22664	4.14	1.0E-108	AI89040.1	EST_HUMAN	18910.1x1 NCL CGAP, P228 Homo sapiens cDNA, clone IMAGE:2248938 3' similar to gb.M14219 BONE
9357	16300	25903	2.76	1.0E-108	AK02447.1	NT	PROTEOGLYCAN II PRECURSOR (HUMAN);
9738	16270	25903	5.56	1.0E-108	BF046356.1	EST_HUMAN	PROTEOGLYCAN II PRECURSOR (HUMAN);
58	10044	19556	0.91	1.0E-108	D68971.1	NT	Homo sapiens mRNA for EL00037 protein, partial cds
212	10183	19697	0.92	1.0E-108	11422406	NT	602518871F1 NCL CGAP, Bms7 Homo sapiens cDNA, clone IMAGE:4154287 5'
222	10183	20063	1.51	1.0E-108	11435391	NT	Homo sapiens mRNA for KIAA0203 gene, partial cds
486	10403	20218	3.64	1.0E-108	AB023216.1	NT	Homo sapiens hypothetical protein FLJ11516 (FLJ11516), mRNA
583	10521	20328	14.94	1.0E-108	AB023216.1	NT	Homo sapiens reticulocalbin 1, EF-hand calcium binding domain 2 (TRC2), mRNA
583	10521	20328	14.94	1.0E-108	AB023216.1	NT	Homo sapiens reticulocalbin 1, EF-hand calcium binding domain 2 (TRC2), mRNA
1194	11065	20841	9.63	1.0E-108	N28966.1	NT	Homo sapiens mRNA for KIAA0659 protein, partial cds
1195	11065	20841	4.88	1.0E-108	N28966.1	NT	Homo sapiens mRNA for KIAA0659 protein, partial cds
1831	11728	21002	1.48	1.0E-108	U13643.2	NT	Homo sapiens nuclear phosphoprotein B23 (NPV1), mRNA, complete cds
2184	12061	21895	2.03	1.0E-108	AL1163384.2	NT	Homo sapiens nuclear phosphoprotein B23 (NPV1), mRNA, complete cds
2204	12061	21895	2.03	1.0E-108	AL1163384.2	NT	Homo sapiens nuclear phosphoprotein B23 (NPV1), mRNA, complete cds
2204	12061	21895	1.87	1.0E-108	V17123.1	NT	Homo sapiens chromosome 21 segment HS21C084
2581	12452	22344	3.88	1.0E-108	AI022028.1	EST_HUMAN	Homo sapiens SNFISN11 gene, exon 6
2581	12452	22344	3.88	1.0E-108	AI022028.1	EST_HUMAN	0w65a0.1x1 Scores: fetal_liver_spln, tNLS, S11 Homo sapiens cDNA, clone IMAGE:1854559 3' similar to TRC002197 002197 CIRCULATING CATHODIC ANTIGEN.;
2581	12452	22345	3.76	1.0E-108	AI022028.1	EST_HUMAN	0w65a0.1x1 Scores: fetal_liver_spln, tNLS, S11 Homo sapiens cDNA, clone IMAGE:1854559 3' similar to TRC002197 002197 CIRCULATING CATHODIC ANTIGEN.;
12453	12453	22346	2.88	1.0E-108	4504206	NT	Homo sapiens guanylate cyclase activator 1A (ralgac1) (GUCA1A), mRNA
3020	12648	22740	1.88	1.0E-108	N65190.1	EST_HUMAN	J2810F Human fetal liver, Lambda ZAP Express Homo sapiens cDNA, clone J2816 5' similar to ZINC FINGER PROTEIN ZNF43
3342	13262	23068	1.45	1.0E-108	AW863192.1	EST_HUMAN	OM3-NN0009-180400-150-F10 NN0009 Homo sapiens cDNA
3342	13262	23069	1.45	1.0E-108	AW863192.1	EST_HUMAN	OM3-NN0009-180400-150-F10 NN0009 Homo sapiens cDNA

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Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar BLAST Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3474	13390	23195	1.2	1.0E-106	AF040698.1	NT	Homo sapiens retinol dehydrogenase homolog, isoform-1 (RDH) mRNA, complete cds
3797	13360		1.53	1.0E-109	BE146144.1	EST_HUMAN	MF0H170205-1T0400-106-404 HT0209 Homo sapiens cDNA
3911	13821	23601	1.54	1.0E-109	AB011811.2	NT	Homo sapiens mRNA for KIAA0609 protein, partial cds
3911	13821	23602	1.54	1.0E-109	AB011811.2	NT	Homo sapiens mRNA for KIAA0609 protein, partial cds
4054	13956	23732	3.67	1.0E-106	A065417.1	EST_HUMAN	ts5606.X1 NCL CGAP_G03 Homo sapiens cDNA clone IMAGE:2269330 similar to WP-F8A2.8 CE16100
4070	13672	23749	1.02	1.0E-109	AA602274.1	EST_HUMAN	nu63c12.e1 NCL CGAP_P122 Homo sapiens cDNA clone IMAGE:1218262 similar to SW-GIT2_HUMAN
4070	13672	23750	1.02	1.0E-109	AA602274.1	EST_HUMAN	nu63c12.e1 NCL CGAP_P122 Homo sapiens cDNA clone IMAGE:1218262 similar to SW-GIT2_HUMAN
4304	14202	23993	2.25	1.0E-109	4654206	NT	P30712 GLUTATHIONE S-TRANSFERASE THETA 2;
4499	14390	24176	1.19	1.0E-109	7622083	NT	P30712 GLUTATHIONE S-TRANSFERASE THETA 2;
4830	14720	24603	1.04	1.0E-109	U13400.1	EST_HUMAN	Homo sapiens guanylate cyclase activator 1A (relins) (GUCY1A) mRNA
4834	14859	24623	0.85	1.0E-109	BE23973.1	EST_HUMAN	Y45406.71 Soares infant brain 1N18 Homo sapiens cDNA clone IMAGE:43057 5'
4884	14859	24627	0.85	1.0E-109	BE23973.1	EST_HUMAN	Y45406.71 Soares infant brain 1N18 Homo sapiens cDNA clone IMAGE:43057 5'
5254	15178	24950	2.31	1.0E-109	6174622	NT	60118922F2 NIH_MGC_15 Homo sapiens cDNA clone IMAGE:2659636 5'
5548	15554		1.48	1.0E-109	BE179388.1	EST_HUMAN	Homo sapiens placental protein 11 (serpin proteases) (P11) mRNA
5648	16323	25491	3.66	1.0E-109	11432574	NT	FCJ-HT0516-20040-022-305 B10340 Homo sapiens cDNA
5653	16323	25492	5.01	1.0E-109	BF182707.1	EST_HUMAN	Homo sapiens AT-binding transcription factor 1 (ATBF1) mRNA
6488	16326	26462	5.01	1.0E-109	BF182707.1	EST_HUMAN	60100439FT NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4040279 5'
6753	16532	26520	1.36	1.0E-109	AL049784.1	NT	60100439FT NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4040279 5'
6920	16969	26952	1.23	1.0E-109	AW749190.1	EST_HUMAN	Novel human gene mapping to chromosome 13
7030	16907		1.72	1.0E-109	A0077498.1	EST_HUMAN	PMA-5 T0340-401258-002-403 B10340 Homo sapiens cDNA
7071	16545	27139	5.71	1.0E-109	BE787540.1	EST_HUMAN	7818401 Chromosome 7 Fetal Brain cDNA Library Homo sapiens cDNA clone IMAGE:3882124 5'
7071	16545	27140	5.71	1.0E-109	BE787540.1	EST_HUMAN	601479417F1 NIH_MGC_68 Homo sapiens cDNA clone IMAGE:3882124 5'
7920	17202	27402	2	1.0E-106	H84800.1	EST_HUMAN	601479417F1 NIH_MGC_68 Homo sapiens cDNA clone IMAGE:3882124 5'
7482	17322	27528	1.41	1.0E-109	F09804.1	EST_HUMAN	Y50961.1 Soares retina N205HR Homo sapiens cDNA clone IMAGE:222110 5' similar to SP-A34341
8155	18043	28264	2.93	1.0E-109	BE340006.1	EST_HUMAN	HSIC1C121 normalized infant brain cDNA Homo sapiens cDNA clone c-fes12
8155	18043	28265	2.93	1.0E-109	BE340006.1	EST_HUMAN	601050303FT NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3449596 5'
8183	18069	28316	14.2	1.0E-109	BF094331.1	EST_HUMAN	601050303FT NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3449596 5'
8335	18312	28464	2.12	1.0E-109	7692276	NT	602060724F2 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:424834 5'
8335	18312	28465	2.12	1.0E-109	7692276	NT	Homo sapiens KIAA0744 gene product, histone desacylase 7 (KIAA0744), mRNA
8468	18341	28908	1.88	1.0E-106	U121370.1	EST_HUMAN	AAU121370 HEMBB1 Homo sapiens cDNA clone HEMBB1002890 5'



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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top Hit BLAST E Value)	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8576	18564	28848	2.19	1.0E-109	4902838	NT	Homo sapiens Chediak-Higashi syndrome 1 (CHST) mRNA
8710	19527	29810	4.83	1.0E-108	W16510.1	EST_HUMAN	z00812.1 Soares, fetal, NH, 15W Homo sapiens cDNA clone IMAGE:301438 5' similar to PR-53093
9269	12091	21963	1.95	1.0E-109	V17123.1	NT	Homo sapiens SNF5/N11 gene, exon 6
9504	19176	29275	2.8	1.0E-109	AB011399.1	NT	Homo sapiens gene for AF-6, complete cds
31	6960	19781	1.48	1.0E-110	7549304.NT	NT	Homo sapiens desminase, lodothyronine, type II (DIO2), transcript variant 2, mRNA
34	10021	19817	3.88	1.0E-110	5903073.NT	NT	Homo sapiens leucine-zipper-like transcriptional regulator, 1 (LZTR1), mRNA
34	10021	19818	3.88	1.0E-110	5903073.NT	NT	Homo sapiens leucine-zipper-like transcriptional regulator, 1 (LZTR1), mRNA
75	10050	19876	30.63	1.0E-110	C004063.1	EST_HUMAN	C04468 Human heart cDNA (YNAKmutant) Homo sapiens cDNA clone 3NHCS3467
104	9690	19781	1.07	1.0E-110	7549304.NT	NT	Homo sapiens desminase, lodothyronine, type II (DIO2), transcript variant 2, mRNA
291	10265	20776	0.91	1.0E-110	087291.1	NT	Human mRNA for inward rectifier potassium channel, complete cds
516	10468	20269	1.16	1.0E-110	084950.1	NT	Human dystrophin (DYN) gene, exon 20
1183	11076	20921	1.08	1.0E-110	8031620.NT	NT	Homo sapiens calcitonin receptor-like receptor (CALCRL) mRNA
1288	11166	21016	1.01	1.0E-110	A903263.1	NT	Homo sapiens BZTB1 mRNA for bromodomain adjacent to zfp finger domain 1B, complete cds
1879	11776	21660	1.8	1.0E-110	BF57817.1	EST_HUMAN	U17231/640-F1 NIH_MGC.141 Homo sapiens cDNA clone IMAGE:3009593 5'
2012	11904		1.86	1.0E-110	BF060896.1	EST_HUMAN	U17484-aa6-3-0-0-0-0-1 NCI-GARP Sub3 Homo sapiens cDNA clone IMAGE:3085784 3'
2810	12730		1.02	1.0E-110	4603088	NT	Homo sapiens chondroitin sulfase proteoglycan 4 (metanome-associated) (CSP-04), mRNA
3048	12976		1.07	1.0E-110	U78027.1	NT	Homo sapiens Bruton's tyrosine kinase (BTK), alpha-D-galactosidase A (GLA), L44-like ribosomal protein (L44L) and F1P3 (F1P3) genes, complete cds
3188	13083	22886	1.87	1.0E-110	11439041	NT	Homo sapiens pregnancy-zone protein (PZP), mRNA
3188	13083	22886	1.87	1.0E-110	11439041	NT	Homo sapiens pregnancy-zone protein (PZP), mRNA
9066	13873	23660	0.92	1.0E-110	BE018656.1	EST_HUMAN	KIAA0569 PROTEIN ;
4533	14426	24207	2.06	1.0E-110	A017213.1	EST_HUMAN	043210.X1 Soares, NF1_T_GBC.31 Homo sapiens cDNA clone IMAGE:1827663 3' similar to SW-N121
4556	14447	24282	2.08	1.0E-110	AU117912.1	EST_HUMAN	SW-N121 RAT P52991 NUCLEAR ENVELOPE PORE MEMBRANE PROTEIN POM 121 ;
4898	14778		2.34	1.0E-110	7662441	NT	AU117912 HEMAI Homo sapiens cDNA clone HEMAI1002241 5'
6297	15161	24929	1.9	1.0E-110	BE289406.1	EST_HUMAN	Homo sapiens KIAA1002 protein (KIAA1002), mRNA
6611	15428	25492	7.34	1.0E-110	11419323	NT	6011181/DTF1 NIH_MGC.17 Homo sapiens cDNA clone IMAGE:3028538 5'
6611	15428	25493	7.34	1.0E-110	11419323	NT	Homo sapiens hypothetical protein FLJ10300 (FLJ10300), mRNA
8511	15429	25493	7.34	1.0E-110	11419323	NT	Homo sapiens hypothetical protein FLJ10300 (FLJ10300), mRNA
8532	15433	26068	4.38	1.0E-110	M65112.1	NT	Human cyclic fibrillar transmembrane conductance regulator (CFTR) gene, exon 7
8591	16053	26113	10.94	1.0E-110	AU714767.1	EST_HUMAN	AU714276 DGB Homo sapiens cDNA clone DGBGCE01 5'
8591	16053	26114	10.94	1.0E-110	AU714767.1	EST_HUMAN	AU714276 DGB Homo sapiens cDNA clone DGBGCE01 5'
6409	16270	26432	2.7	1.0E-110	AB020975.1	NT	Homo sapiens mRNA for KIAA0968 protein, partial cds

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7523	17374	27583	2.91	1.0E-110/AW83894.1	EST_HUMAN	QV2L.T0055-020400-119-004.LT0083 Homo sapiens cDNA	
7915	17785	28004	4.27	1.0E-110	11432732	NT	Homo sapiens galactokinase 2 (GALK2), mRNA
8130	18018	28266	3.7	1.0E-110/Y12337.1	NT	Homo sapiens mRNA for myotonic dystrophy protein kinase like protein	
8334	18211	28462	3.49	1.0E-110/BE734357.1	EST_HUMAN	901665804.F1 NH_MGC_21 Homo sapiens cDNA clone IMAGE:3840433 5'	
8334	18211	28463	3.49	1.0E-110/BE734357.1	EST_HUMAN	901665804.F1 NH_MGC_21 Homo sapiens cDNA clone IMAGE:3840433 5'	
8740	17889	29133	2.43	1.0E-110/AA446529.1	EST_HUMAN	zw67.g02.71 Soares, testis_NHT Homo sapiens cDNA clone IMAGE:781298 5' similar to TR-G1148516	
9081	18857		4.15	1.0E-110/BE65718.1	EST_HUMAN	G1148516 FKBP54.1	
9204	18635		5.78	1.0E-110/AW09258.1	EST_HUMAN	901539784.F1 NH_MGC_72 Homo sapiens cDNA clone IMAGE:3924448 5'	
9444	19080		5.03	1.0E-110/AB011398.1	EST_HUMAN	PK3-NY1082-140900-005-F12.NT1082 Homo sapiens cDNA	
9578	19884		1.07	1.0E-110/BE734357.1	EST_HUMAN	Human fibronectin protein L23a mRNA, complete cds	
1058	10140		16.85	1.0E-111/U43701.1	NT		
1089	10161	19978	1.02	1.0E-111	4795807	NT	Homo sapiens ras GTPase activating protein-like (NGAP) mRNA
718	10559		1.87	1.0E-111	BF03327.1	EST_HUMAN	Homo sapiens cell eye syndrome critical region gene 1 (CECR1), mRNA
728	10558	20486	3.56	1.0E-111	8390392	NT	Homo sapiens cell eye syndrome critical region gene 1 (CECR1), mRNA
911	10835	20584	73.92	1.0E-111/M25142.1	NT		Homo sapiens alpha-myosin heavy chain (MYH6) gene, exons 32 to 34
3642	13556	23342	1.17	1.0E-111	6912641	NT	Homo sapiens sex comb on midleg homolog 1 (SCMH1), mRNA
3642	13556	23343	1.17	1.0E-111	6912641	NT	Homo sapiens sex comb on midleg homolog 1 (SCMH1), mRNA
4060	13582	23760	1.08	1.0E-111	7681566	NT	Homo sapiens DKFZ434D165 protein (DKFZ434D165), mRNA
4295	14133	23909	4.45	1.0E-111/K02258.1	NT		Human enkephalin B (enkeB) gene, exon 4 and 3' flank and complete cds
5394	15284	25117	2.82	1.0E-111/AA151017.1	EST_HUMAN	347007.1 Soares, pregnant, uterus_NHFFU Homo sapiens cDNA clone IMAGE:509045 5' similar to g9-M23575 PREGNANCY-SPECIFIC BETA-1 GLYCOPROTEIN C PRECURSOR (HUMAN);	
5394	15284	25118	2.82	1.0E-111/AA151017.1	EST_HUMAN	347007.1 Soares, pregnant, uterus_NHFFU Homo sapiens cDNA clone IMAGE:509045 5' similar to g9-M23575 PREGNANCY-SPECIFIC BETA-1 GLYCOPROTEIN C PRECURSOR (HUMAN);	
5575	15584	25585	1.71	1.0E-111/AB344678.1	EST_HUMAN	47007.1 Soares, pregnant, uterus_NHFFU Homo sapiens cDNA clone IMAGE:509045 5' similar to g9-M23575 PREGNANCY-SPECIFIC BETA-1 GLYCOPROTEIN C PRECURSOR (HUMAN);	
6402	16293	28423	3.03	1.0E-111/BF365228.1	EST_HUMAN	47007.1 Soares, pregnant, uterus_NHFFU Homo sapiens cDNA clone IMAGE:509045 5' similar to g9-M23575 PREGNANCY-SPECIFIC BETA-1 GLYCOPROTEIN C PRECURSOR (HUMAN);	
6570	16437	28522	2.20	1.0E-111/AA133914.1	EST_HUMAN	47007.1 Soares, pregnant, uterus_NHFFU Homo sapiens cDNA clone IMAGE:509045 5' similar to g9-M23575 PREGNANCY-SPECIFIC BETA-1 GLYCOPROTEIN C PRECURSOR (HUMAN);	
6795	16974	28666	3.13	1.0E-111/U06533.1	NT	47007.1 Soares, pregnant, uterus_NHFFU Homo sapiens cDNA clone IMAGE:509045 5' similar to g9-M23575 PREGNANCY-SPECIFIC BETA-1 GLYCOPROTEIN C PRECURSOR (HUMAN);	
7113	16960		10.8	1.0E-111/BF214602.1	EST_HUMAN	47007.1 Soares, pregnant, uterus_NHFFU Homo sapiens cDNA clone IMAGE:509045 5' similar to g9-M23575 PREGNANCY-SPECIFIC BETA-1 GLYCOPROTEIN C PRECURSOR (HUMAN);	
7149	17026	27221	13.75	1.0E-111/X17033.1	NT	47007.1 Soares, pregnant, uterus_NHFFU Homo sapiens cDNA clone IMAGE:509045 5' similar to g9-M23575 PREGNANCY-SPECIFIC BETA-1 GLYCOPROTEIN C PRECURSOR (HUMAN);	
7149	17026	27222	13.75	1.0E-111/X17033.1	NT	47007.1 Soares, pregnant, uterus_NHFFU Homo sapiens cDNA clone IMAGE:509045 5' similar to g9-M23575 PREGNANCY-SPECIFIC BETA-1 GLYCOPROTEIN C PRECURSOR (HUMAN);	
7251	17128	27321	3.28	1.0E-111/AF091965.1	NT	47007.1 Soares, pregnant, uterus_NHFFU Homo sapiens cDNA clone IMAGE:509045 5' similar to g9-M23575 PREGNANCY-SPECIFIC BETA-1 GLYCOPROTEIN C PRECURSOR (HUMAN);	

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Meat Similar (Top Hit BLAST E Value)	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7690	17600	27935	1.51	1.0E-111	AAS90180.1	EST_HUMAN	aas902.s1 NCL_OGAP_GGB1 Homo sapiens cDNA clone IMAGE:628170 3' similar to gbl:06235
7693	17737	27969	6.35	1.0E-111	AA91248.1	EST_HUMAN	VACUOLAR ATP SYNTHASE CATALYTIC SUBUNIT A, URBIQUITOUS (HUMAN);
8401	18377	28259	4.52	1.0E-111	UA69159.1	NT	ZBTB107.17 Sorensen, pregnant, uterus_NKHPU Homo sapiens cDNA clone IMAGE:003945 5'
9088	18625	28130	3.04	1.0E-111	11417601	NT	Human thrombospondin receptor (NPD) gene, exons 1,2,3,4,5 and 6
9436	19469	29110	1.60	1.0E-111	W22622.1	EST_HUMAN	Homo sapiens methionine(4) (disrupted in balanced translocation) 7 (MINT), mRNA
9850	19422	28717	1.39	1.0E-111	11430460	NT	2/209 Human retina cDNA 169500-1 cloned sublibrary Homo sapiens cDNA not directional
9950	19422	28717	1.39	1.0E-111	11430460	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
5921	10528	20337	2.08	1.0E-112	450185A	NT	Homo sapiens scd4-mycobacterium A carboxylase beta (ACA/CAB), mRNA
594	10530	20337	2.08	1.0E-112	450185A	NT	Homo sapiens scd4-mycobacterium A carboxylase beta (ACA/CAB), mRNA
594	10530	20338	4.49	1.0E-112	U29103.1	NT	Homo sapiens steroidogenic acute regulatory protein (SAR) gene, exon 5
616	10552	20363	1.48	1.0E-112	BF500039.1	EST_HUMAN	UHBR-404-04-04J.1 NCL_OGAP_Su89 Homo sapiens cDNA clone IMAGE:308923 3'
616	10552	20363	1.48	1.0E-112	BF500039.1	EST_HUMAN	UHBR-404-04-04J.1 NCL_OGAP_Su89 Homo sapiens cDNA clone IMAGE:308923 3'
985	10809	20753	2.78	1.0E-112	AF157623.1	SWISSPROT	Homo sapiens HTRA serine protease (PRSS17) gene, complete cds
1046	10894	20905	1.72	1.0E-112	P27472	SWISSPROT	ZINC FINGER PROTEIN 135
1685	11960	21424	5.88	1.0E-112	76921.26	NT	Homo sapiens KIAA0440 protein (KIAA0440), mRNA
1595	11960	21425	5.88	1.0E-112	76921.26	NT	Homo sapiens KIAA0440 protein (KIAA0440), mRNA
2460	12337	22910	2.43	1.0E-112	BE06889.1	EST_HUMAN	Homo sapiens KIAA0440 protein (KIAA0440), mRNA
3900	13721	23510	0.83	1.0E-112	BE067073.1	EST_HUMAN	MPC1-BT0590-06300-113-89 BT0590 Homo sapiens cDNA
4546	14533	24321	5.12	1.0E-112	AB037832.1	NT	Homo sapiens mRNA for KIAA1411 protein, partial cds
4546	14533	24322	5.12	1.0E-112	AB037832.1	NT	Homo sapiens mRNA for KIAA1411 protein, partial cds
5170	15036	24804	0.94	1.0E-112	090569	NT	Homo sapiens low density lipoprotein receptor related protein deleted in tumor (LRPDT), mRNA
5471	15357	25453	33.34	1.0E-112	N40046.1	EST_HUMAN	y55487.1 Soares monocytic 2kBHM Homo sapiens cDNA clone IMAGE:273229 5'
6340	16203	26364	1.81	1.0E-112	11416777	NT	Homo sapiens soluble carrier family 6 (neuronal-specific transporter, L-proline), member 7 (SLC6A7), mRNA
6340	16203	26365	1.81	1.0E-112	11416777	NT	Homo sapiens soluble carrier family 6 (neuronal-specific transporter, L-proline), member 7 (SLC6A7), mRNA
6766	16845	26834	1.66	1.0E-112	AU119051.1	EST_HUMAN	AUT160571 PEMBAT1 Homo sapiens cDNA clone FEMBA1100773 5'
7181	17058	27247	2.25	1.0E-112	DE867635.1	EST_HUMAN	601443161F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:3547285 5'
7181	17058	27248	2.25	1.0E-112	DE867635.1	EST_HUMAN	601443161F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:3547285 5'
7693	17543	27377	2.09	1.0E-112	BF111443.1	EST_HUMAN	-78907.s1 Sorensen, NSF_Fg_SW_OT 3' J1 Homo sapiens cDNA clone IMAGE:352620 3' similar to
8150	18047	29269	4.25	1.0E-112	AJ633527.1	EST_HUMAN	TG-OBNW39 3' Ovaries, NSF_Fg_SW_OT 3' J1 Homo sapiens cDNA clone IMAGE:352620 3' similar to
8316	18195	29445	2.86	1.0E-112	AJ429600.1	NT	MR3-SND009-100400-105-817 SND009 Homo sapiens cDNA
8316	18195	29445	2.86	1.0E-112	AJ429600.1	NT	Homo sapiens mRNA for secreted modular calcium-binding protein (smcrt1 gene)

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) HT BLAST Value	Top HT Accession No.	Top HT Database Source	Top HT Descriptor
8445	18319	28578	1.72	1.0E-112	BE280479.1	EST_HUMAN	g01155329f1.NIH_MGC_21 Homo sapiens cDNA clone IMAGE:313888 5'
8500	18373	28637	1.75	1.0E-112	AI792603.1	EST_HUMAN	q324608.y9.NCI_CGAP_7083 Homo sapiens cDNA clone IMAGE:1889902 5' similar to TR:364382 Q64362 FUSED TOES ;
8500	18373	28638	1.75	1.0E-112	AI792603.1	EST_HUMAN	q324608.y9.NCI_CGAP_7083 Homo sapiens cDNA clone IMAGE:1889902 5' similar to TR:364382 Q64362 FUSED TOES ;
8521	18383	28687	5	1.0E-112	AB377670.1	EST_HUMAN	PMO-CT0237-141089-001-H02 CT0237 Homo sapiens cDNA
725	10657	20487	3.71	1.0E-119	AI385598.1	EST_HUMAN	ac6801.xt Schiller meningioma Homo sapiens cDNA clone IMAGE:1959325 3'
725	10657	20488	3.71	1.0E-119	AI385598.1	EST_HUMAN	ac6801.xt Schiller meningioma Homo sapiens cDNA clone IMAGE:1959325 3'
827	10852	20700	0.32	1.0E-113	U11603.1	NT	Human X-linked phosphoglycerate kinase gene, exon 8
1523	11428	21286	2.94	1.0E-119	AI385598.1	EST_HUMAN	ac6801.xt Schiller meningioma Homo sapiens cDNA clone IMAGE:1959325 3'
2048	11939	21833	1.18	1.0E-113	BF515218.1	EST_HUMAN	U1H-BW1-ant4-F03-DJ1 at NCI_CGAP_Sub7 Homo sapiens cDNA clone IMAGE:302576 3'
2405	12282	22176	0.95	1.0E-113	AJ005976.1	EST_HUMAN	Homo sapiens FLP gene
3091	13018	22813	2.34	1.0E-113	AJ223484.1	NT	Homo sapiens mRNA for putative RNA helicase, 3' end
5035	14007	24671	0.95	1.0E-113	7657055	NT	Homo sapiens v-avl avian erythroblastosis virus E26 oncogene related (ERG), mRNA
6035	14807	24672	0.95	1.0E-113	7657055	NT	Homo sapiens v-avl avian erythroblastosis virus E26 oncogene related (ERG), mRNA
8211	19324	25144	18.27	1.0E-113	BE780585.1	EST_HUMAN	g01149446f1.NIH_MGC_67 Homo sapiens cDNA clone IMAGE:3872556 5'
5371	19324	25144	8.33	1.0E-113	AU127214.1	EST_HUMAN	AU127214.NT2622 Homo sapiens cDNA clone IMAGE:3872556 5'
8638	15523	25505	3.92	1.0E-113	AU140291.1	EST_HUMAN	AU140291.PLAGE2 Homo sapiens cDNA clone IMAGE:200274 5'
5690	15808	25710	2.05	1.0E-113	11525737	NT	Homo sapiens UDP-N-acetyl-alpha-D-glucosaminyl-polyphosphate N-acetylglucosaminyltransferase 8 (GALNAc-19) (GALNT8), mRNA
7257	17134	27326	2.98	1.0E-113	BE532921.1	EST_HUMAN	g01207708f1.NIH_MGC_19 Homo sapiens cDNA clone IMAGE:3827554 5'
7257	17134	27327	2.98	1.0E-113	BE532921.1	EST_HUMAN	g01207708f1.NIH_MGC_19 Homo sapiens cDNA clone IMAGE:3827554 5'
7698	17506	27731	1.26	1.0E-113	11429367	NT	Homo sapiens transmembrane protein 2 (TMEM2), mRNA
8486	18339	28604	1.73	1.0E-113	AIW50516.1	EST_HUMAN	UHFH-SNO-ah3-12-0-U1r1.NIH_MGC_50 Homo sapiens cDNA clone IMAGE:307328 5'
8550	17719	28632	2.07	1.0E-113	6006002	NT	Homo sapiens glutamate receptor, ionotropic, N-methyl D-aspartate 2A (GRIN2A), mRNA
8550	15719	28633	2.07	1.0E-113	6006002	NT	Homo sapiens glutamate receptor, ionotropic, N-methyl D-aspartate 2A (GRIN2A), mRNA
8594	18452	28721	3.44	1.0E-113	BE202968.1	EST_HUMAN	g01105529f1.NIH_MGC_16 Homo sapiens cDNA clone IMAGE:298386 5'
629	10569	20376	7.66	1.0E-114	T70551.1	EST_HUMAN	yH5cd1.s1 Soares fetal liver spleen 1NfLS Homo sapiens cDNA clone IMAGE:108288 3' similar to gb:A21187.A1P4H-2MARGOLUBIN PRECURSOR (HUMAN) contains Alu repetitive element;
10351	10972	20815	1.31	1.0E-114	8922087	NT	Homo sapiens thymosin protein FLJ20380 (FLJ20380), mRNA
1291	11188	21053	3.47	1.0E-114	76575291	NT	Homo sapiens rhodopsin-like protein 1 (RTRD1), mRNA
1618	11552	21413	5.53	1.0E-114	6676073	NT	Homo sapiens nucleoside-like protein 1 (NLP_1), mRNA
2773	10025	19823	0.82	1.0E-114	AB033102.1	NT	Homo sapiens mRNA for KIAA1276 protein, partial cds

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## Single Exon Probes Expressed in Heart

Probes SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top Hit) Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2773	10028	19324	0.82	1.0E-114	AB033102.1	NT	Homo sapiens mRNA for KIAA1278 protein, partial cds
3092	13019	22814	2.28	1.0E-114	U04008.1	NT	Human gene for catalase (EC 1.11.1.6) onon 2 mapping to chromosome 11, band p15
3155	13060	22889	1.2	1.0E-114	BF00374.1	EST_HUMAN	U01690332F: NIH MC6-19 Homo sapiens cDNA clone IMAGE:4100214 5'
3304	13843	23921	1.06	1.0E-114	AF149773.1	NT	Homo sapiens NOD1 protein (NOD1) gene, exons 1, 2, and 3
5120	14988	24762	2.1	1.0E-114	AF194468.1	EST_HUMAN	zfp561.1 Stragelens muscle 837205 Homo sapiens cDNA clone IMAGE:526832 5' similar to contains MER22.18 MER22 repetitive element;
5121	14989	24763	2.31	1.0E-114	AF004849.1	EST_HUMAN	Homo sapiens PKY protein kinase mRNA, complete cds
5316	15237	25040	1.37	1.0E-114	4508890	NT	Homo sapiens sema domain, seven thrombospondin repeats (type 1 and type 1-like), transmembrane domain (TM) and short cytoplasmic domain, (sensaphorin) 5A (SEMA5A) mRNA
5316	15237	25041	1.37	1.0E-114	4508890	NT	Homo sapiens sema domain, seven thrombospondin repeats (type 1 and type 1-like), transmembrane domain (TM) and short cytoplasmic domain, (sensaphorin) 5A (SEMA5A) mRNA
5316	16779	26335	7.08	1.0E-114	Y18000.1	NT	Homo sapiens NF2 gene
5316	16779	26339	7.08	1.0E-114	Y18000.1	NT	Homo sapiens NF2 gene
6008	18488	26973	1.86	1.0E-114	4567600	EST_HUMAN	Homo sapiens gamma-aminobutyric acid (GABA) A receptor, alpha 2 (GABRA2) mRNA
6748	18927	26914	1.73	1.0E-114	A3363139.1	EST_HUMAN	cyf98408.x1 NCI CGAP Bnc25 Homo sapiens cDNA clone IMAGE:2017163 3'
6748	18927	26915	1.73	1.0E-114	A3363139.1	EST_HUMAN	cyf98408.x1 NCI CGAP Bnc25 Homo sapiens cDNA clone IMAGE:2017163 3'
7048	18928	27119	3.30	1.0E-114	U03041.1	NT	Human neural cell adhesion molecule CD56 mRNA, complete cds
7060	18967	27161	6.35	1.0E-114	AB011133.1	NT	Homo sapiens mRNA for KIAA0561 protein, partial cds
7060	18967	27162	6.35	1.0E-114	AB011133.1	NT	Homo sapiens mRNA for KIAA0561 protein, partial cds
7418	17285	26952	3.79	1.0E-114	AF327465.1	EST_HUMAN	cd35033X1 NIH MC6-2 Homo sapiens cDNA clone IMAGE:2846744 5'
7447	18458	26952	3.13	1.0E-114	AF07754.1	NT	Homo sapiens tyrosine kinase pp60-csrc (SRC) gene, exon 12 and partial cds
7844	17894	27640	1.31	1.0E-114	AL032272.2	NT	Homo sapiens chromosome 21 segment HS21G27
8167	18055		7.14	1.0E-114	BE002966.1	EST_HUMAN	bc79312.1 NIH MC6-30 Homo sapiens cDNA clone IMAGE:2806086 5' similar to gbX17209.408
8527	18369	28866	4.58	1.0E-114	AV733454.1	EST_HUMAN	RIBOSOMAL PROTEIN S4 (HUMAN), gbX1720932 Mouse L1Rip3 protein mRNA from a repetitive element, complete (MOUSE).
8527	18369	28867	4.58	1.0E-114	AV733454.1	EST_HUMAN	AV733454 cda Homo sapiens cDNA clone cdaBA08 5'
8534	18947	28987	2.86	1.0E-114	AV733454.1	EST_HUMAN	AV733454 cda Homo sapiens cDNA clone cdaBA08 5'
8534	18947	28983	2.86	1.0E-114	AV733454.1	EST_HUMAN	AV733454 cda Homo sapiens cDNA clone cdaBA08 5'
9479	19748		3.21	1.0E-114	11418041	NT	Homo sapiens TNF-inducible protein CG2-1 (CG2-1), mRNA
9729	19266	25222	3.00	1.0E-114	11034630	NT	Homo sapiens hypothetical protein (DJ1042K10.2), mRNA
9729	19269	25223	3.00	1.0E-114	11034630	NT	Homo sapiens hypothetical protein (DJ1042K10.2), mRNA
21	10038	19801	3.36	1.0E-115	4758111	NT	Homo sapiens HLA-B associated transcript-1 (DRB381) mRNA
125	10059	19920	0.95	1.0E-115	4505538	NT	Homo sapiens polymerase (RNA) (DNA directed) polypeptide A (220k) (POLR2A) mRNA

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Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
129	10103		1.99	1.0E-115	4657387	NT	Homo sapiens keratin 18 (KRT18) mRNA
269	10263	20073	2.17	1.0E-115	AW804759.1	EST_HUMAN	QV4-UM0094-300306-158-108 UM0094 Homo sapiens cDNA IMAGE:1948609 9 similar to TR:0008530 000858
525	10407	20278	1.08	1.0E-115	AB39206.1	EST_HUMAN	TTT1-INTERACTING PEPTIDE 5:
525	10407	20278	1.08	1.0E-115	AB39206.1	EST_HUMAN	TTT1-INTERACTING PEPTIDE 5:
769	10599	20537	1.83	1.0E-115	5174702	NT	Homo sapiens transforming growth factor beta-activated kinase-binding protein 1 (TAB1), mRNA
769	10599	20538	1.83	1.0E-115	5174702	NT	Homo sapiens transforming growth factor beta-activated kinase-binding protein 1 (TAB1), mRNA
771	10701	20540	48.82	1.0E-115	4603794	NT	Homo sapiens ferritin, heavy polypeptide 1 (FT1H) mRNA
1539	11443	21831	0.92	1.0E-115	AF229180.1	NT	Homo sapiens alpha-antitrypsin semialdehyde synthase mRNA, complete cds
1539	11443	21832	0.92	1.0E-115	AF229180.1	NT	Homo sapiens alpha-antitrypsin semialdehyde synthase mRNA, complete cds
1785	11693	21561	3.14	1.0E-115	AJ277622.1	NT	Homo sapiens partial TTM gene for fibrin
1786	11696	21573	1.42	1.0E-115	U78027.1	NT	Homo sapiens Bubrin tyrosine kinase (BTK), alpha-D-galactosidase A (GLA), L44-like ribosomal protein (L44), and FTP2 (FTP3) genes, complete cds
2034	11628	21517	0.87	1.0E-115	BE75469.1	EST_HUMAN	801579536F1 NH: MGC 9 Homo sapiens cDNA clone IMAGE:3928932 5'
2034	11628	21518	0.87	1.0E-115	BE75469.1	EST_HUMAN	801579536F1 NH: MGC 9 Homo sapiens cDNA clone IMAGE:3928932 5'
2820	12749		1.76	1.0E-115	AB564786.1	EST_HUMAN	QV4-UM0094-300309-159-108 UM0094 Homo sapiens cDNA
3077	13004	22795	2.1	1.0E-115	AJ246221.1	NT	Homo sapiens tRNA for alpha-actinin 8 (TUBA8 gene)
3077	13004	22798	2.1	1.0E-115	AJ246221.1	NT	Homo sapiens tRNA for alpha-actinin 8 (TUBA8 gene)
3427	13344	23149	4.03	1.0E-115	AJ277622.1	NT	Homo sapiens partial TTM gene for fibrin
3905	13864	23640	4.04	1.0E-115	AJ007248.2	NT	Homo sapiens tRNA for arginine 3 (TUBA3 gene)
4159	14069	23644	1.09	1.0E-115	AL137163.1	NT	Novel human gene mapping to chromosome X
4301	14169	23683	3.41	1.0E-115	6712659	NT	Homo sapiens 322-ites 3 (S13), mRNA
4335	14232	24014	3.83	1.0E-115	6718579	NT	Homo sapiens EFHA4 (EFHA4) mRNA
4578	14468	24254	2.58	1.0E-115	AL006957.1	NT	Novel human mRNA from chromosome 1, which has similarities to BAT2 genes
4676	14468	24254	2.58	1.0E-115	AL006957.1	NT	Novel human mRNA from chromosome 1, which has similarities to BAT2 genes
4813	14696	24462	2.96	1.0E-115	AL163268.2	NT	Homo sapiens chromosome 21 segment HS21098
4813	14696	24463	2.96	1.0E-115	AL163268.2	NT	Homo sapiens chromosome 21 segment HS21098
5279	15201	21677	1.76	1.0E-115	AF097036.1	EST_HUMAN	EST3362416 MGC: ressequences, MGC Homo sapiens cDNA
8330	15290	25595	7.22	1.0E-115	BF096387.1	EST_HUMAN	602116046F1 NH: MGC 95 Homo sapiens cDNA clone IMAGE:4276738 5'
8402	15321	25599	2.05	1.0E-115	11426126	NT	Homo sapiens similar to ER to nucleus signalling 1 (H: sapiens) (LOC03433), mRNA
8402	15321	25599	2.05	1.0E-115	11426126	NT	Homo sapiens similar to ER to nucleus signalling 1 (H: sapiens) (LOC03433), mRNA
9532	15768	28576	12.92	1.0E-115	11426038	NT	Homo sapiens similar to ribosomal protein S26 (H: sapiens) (LOC03433), mRNA
9923	15836	25590	1.93	1.0E-115	7661883	NT	Homo sapiens KIAA0054 gene product: Helicase (KIAA0054), mRNA

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Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Mean Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5033	15839	25691	1.93	1.0E-115	7661893	NT	Homo sapiens KIAA0054, gene product, Helicase (KIAA0054), mRNA
6313	16176	25334	1.55	1.0E-115	A076568.1	EST_HUMAN	cd324a0.x1 Scores: total: 165, N52HF8, Sw Homo sapiens cDNA clone IMAGE:1670914 3'
6313	16176	25334	1.55	1.0E-115	A076568.1	EST_HUMAN	cd324a0.x1 Scores: total: 165, N52HF8, Sw Homo sapiens cDNA clone IMAGE:1670914 3'
6379	16241	26401	7.41	1.0E-115	AB022212.1	NT	Homo sapiens mRNA for KIAA0956 protein, partial cds
6744	16623	26811	12.78	1.0E-115	BE330187.1	EST_HUMAN	RCB-ET0081-130700-011-G01 ET0081 Homo sapiens cDNA
6744	16623	26812	12.78	1.0E-115	BE330187.1	EST_HUMAN	RCB-ET0081-130700-011-G01 ET0081 Homo sapiens cDNA
7116	16953	27184	2.2	1.0E-115	11434722	NT	Homo sapiens eukaryotic translation initiation factor 4B (EIF4B), mRNA
7745	17665	27618	1.92	1.0E-115	AB002336.1	NT	Human mRNA for KIAA0338 gene, partial cds
7745	17665	27617	1.92	1.0E-115	AB002336.1	NT	Human mRNA for KIAA0338 gene, partial cds
8100	17900	28339	3.5	1.0E-115	NW571544.1	EST_HUMAN	xx3208.x1 NGL GGA2 UH Homo sapiens cDNA clone IMAGE:2832230 3' similar to SW_CAYP_CANFA
8101	18219	28801	2.28	1.0E-115	AB026238	NT	P10493 CALYPTHOSINE
890	10500	20305	1.42	1.0E-116	BE27550.1	EST_HUMAN	Homo sapiens calcium channel, voltage-dependent, alpha 1E subunit (CACNA1E), mRNA
783	10713	20552	1.25	1.0E-116	4507334	NT	601121347F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:368876 5'
841	10768	20661	6.86	1.0E-116	4507334	NT	Homo sapiens synapogamin 1 (SYNU1), mRNA
1982	11847	21733	2.38	1.0E-116	5174478	NT	Homo sapiens synapogamin 1 (SYNU1), mRNA
1982	11847	21734	2.38	1.0E-116	5174478	NT	Homo sapiens perlecanin (PCNT), mRNA
1980	11873	21765	1.21	1.0E-116	AU133080.1	EST_HUMAN	AU133080 NT2894 Homo sapiens cDNA clone NT2894-401/228 5'
2050	12711	21834	1.01	1.0E-116	M19824.1	NT	Human apolipoprotein B-100 (apoB) gene, exons 17 and 18
2050	12711	21835	1.01	1.0E-116	M19824.1	NT	Human apolipoprotein B-100 (apoB) gene, exons 17 and 18
2256	12143	22012	1.38	1.0E-116	6493941	NT	Homo sapiens protein phosphatase, EF hand calcium-binding domain 1 (PPEF1), mRNA
2263	12175	22181	1.49	1.0E-116	U76308.1	NT	Human olfactory receptor olfr17-201-1 (OR17-201-1) gene, olfactory receptor olfr17-32 (OR17-32) gene and olfactory receptor pseudo, olfr17-01 (OR17-01) pseudogene, complete cds
2407	12284	22181	4.48	1.0E-116	A0118333.1	NT	Homo sapiens mRNA for KIAA0780 protein, partial cds
2704	12656	22458	2.16	1.0E-116	BE886268.1	EST_HUMAN	601513337F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3914800 5'
3137	13052	22960	4.73	1.0E-116	L17570.1	NT	Homo sapiens DiGeorge syndrome critical region, centromeric end
3137	13052	22961	4.73	1.0E-116	L17570.1	NT	Homo sapiens DiGeorge syndrome critical region, centromeric end
4281	14180	23958	2.01	1.0E-116	60319654	NT	Homo sapiens sodium phosphate transporter 3 (NPT3), mRNA
4747	14832	24418	2.17	1.0E-116	A070095.1	EST_HUMAN	PM-BT135-070490-016 BT135 Homo sapiens cDNA
5122	14990	24784	1.12	1.0E-116	AJ245213.1	NT	Homo sapiens partial 5-HT14 receptor gene, exons 2 to 5
5687	15550	25641	5.88	1.0E-116	NW12622.1	EST_HUMAN	ze2407.71 Scores: senescence, fibroblasts, NIHFS Homo sapiens cDNA clone IMAGE:323245 5' similar to SW-MDM1_MOUSE P08249 MALATE DEHYDROGENASE, MITOCHONDRIAL PRECURSOR;
5768	15978	25751	1.65	1.0E-116	AB048588.1	NT	Homo sapiens mRNA for KIAA1689 protein, partial cds

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar Top HiTE BLAST E Value	Top HiTE Accession No.	Top HiTE Database Source	Top HiTE Descriptor
5708	15675	25782	1.65	1.0E-116	AB046856.1	NT	Homo sapiens mRNA for KIAA1658 protein, partial cds
5823	15759	28577	72.79	1.0E-116	BF077910.1	EST_HUMAN	6020847307F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4240687 5'
5824	15529		1.8	1.0E-116	BE159133.1	EST_HUMAN	MF2-H10379-210200-102-504 I10379 Homo sapiens cDNA
6145	16018	28156	3.59	1.0E-116	C02944.1	EST_HUMAN	C02944 Homo heart cDNA (YNAKmurata) Homo sapiens cDNA
6275	16139	28265	7.97	1.0E-116	A0716314	EST_HUMAN	A0716314 DCB3 Homo sapiens cDNA clone D08B03007 5'
6874	16753	29540	1.99	1.0E-116	A4354255.1	EST_HUMAN	EST62685 Juckett T-cells V Homo sapiens cDNA 5' end similar to keratin 2
6874	16753	29540	1.99	1.0E-116	A4354255.1	EST_HUMAN	EST62685 Juckett T-cells V Homo sapiens cDNA 5' end similar to keratin 2
7173	17050	27238	1.43	1.0E-116	BE55507.1	EST_HUMAN	01339268F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:3860590 5'
7280	17137	27330	1.98	1.0E-116	A218352.1	EST_HUMAN	q95005.v1 Soares_NFL_1_GSC_S1 Homo sapiens cDNA clone IMAGE:1841168 3' similar to
7577	17428	27542	1.77	1.0E-116		EST_HUMAN	de-X53741_mst1 FIBULN-1, ISOFORM A PRECURSOR (HUMAN);
8074	17665	28216	3.68	1.0E-116	BF335946.1	EST_HUMAN	Homo sapiens laminin, alpha 2 (macron, congenital muscular dystrophy) (LAMA2), mRNA
8477	18360	29616	3.23	1.0E-116	A387140.1	EST_HUMAN	Q41643.v1 Soares_NHLH1P4_S1 Homo sapiens cDNA clone IMAGE:1935102 3' similar to WP-B0465.7
5991	19741		2.08	1.0E-116	BE238566.1	EST_HUMAN	CD11165
9778	19814		2.63	1.0E-116	AL134860.1	EST_HUMAN	00106550F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3344580 5'
548	10487	20208	1.18	1.0E-117	4829936	NT	DKP2762L1110_T1 762 (synonym: hml2) Homo sapiens cDNA clone DKP2762L1110 5'
1061	12684	20521	1.59	1.0E-117	AF12493.1	NT	Homo sapiens acyl-CoA:cholesterol CoA transferase A carboxylase alpha (ACACA), mRNA
1719	11620	21450	6.25	1.0E-117	AF123320.1	NT	Mus musculus troponin-related protein 1 (Pth1) gene, exons 13a through 15
1790	11988	21584	2.31	1.0E-117	MF16816.1	NT	Homo sapiens lymphocyte activation-associated protein mRNA, complete cds
2164	12051	21952	2.99	1.0E-117	AW657699.1	EST_HUMAN	Homo apolipoprotein B-100 (apoB) gene, exon 10
3200	13154	22539	1.75	1.0E-117	A478114.1	EST_HUMAN	EST1369709 IMAGE resubsequence, IMAGE Homo sapiens cDNA
3008	13918	23509	3.82	1.0E-117	A4316723.1	EST_HUMAN	q93271.at Soares_NFL_1_GSC_S1 Homo sapiens cDNA clone IMAGE:1579548 3'
4347	14146	23920	1.86	1.0E-117	8695604	EST_HUMAN	EST189414 HCC cell line (metastasis to liver in mouse) [1 Homo sapiens cDNA 5' end similar to ribosomal protein L29
4347	14146	23920	1.86	1.0E-117	8695604	EST_HUMAN	Homo sapiens collagen, type IV, alpha 5 (Alport syndrome) (COL4A5), mRNA
4475	14396	24158	1.88	1.0E-117	AL042110.1	EST_HUMAN	DNFZP434C1120_11_034 (synonym: hlec3) Homo sapiens cDNA clone DKP-Zp-434C1120 5'
4622	14510	24599	1.35	1.0E-117	886701.1	NT	H. sapiens mRNA for TFCR16 protein
4622	14510	24599	1.35	1.0E-117	886701.1	NT	H. sapiens mRNA for TFCR16 protein
4622	14510	24599	1.35	1.0E-117	886701.1	NT	H. sapiens mRNA for TFCR16 protein
4705	14591	24593	9.22	1.0E-117	AF134304.2	NT	Homo sapiens Sca2 (SCAR2) gene, partial cds
4705	14591	24593	9.22	1.0E-117	AF134304.2	NT	Homo sapiens Sca2 (SCAR2) gene, partial cds
4856	14765	24516	3.36	1.0E-117	AB02073.1	NT	Homo sapiens mRNA for KIAA0699 protein, complete cds
5280	15022	24679	2.5	1.0E-117	BE170308.1	EST_HUMAN	00156580F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3832214 5'
6404	16255	26428	4.99	1.0E-117	J67651.1	NT	Homo sapiens nuclear hormone receptor (nhr) gene, 3' end of cds
6404	16255	26428	4.99	1.0E-117	J67651.1	NT	Homo sapiens nuclear hormone receptor (nhr) gene, 3' end of cds



Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6485	10316	20462	3.77	1.0E-117	AV171788.1	EST_HUMAN	AV171788 DGB Homo sapiens cDNA clone DGBAE01 6'
6485	10316	20463	3.77	1.0E-117	AV171788.1	EST_HUMAN	AV171788 DGB Homo sapiens cDNA clone DGBAE01 6'
6691	16631	26726	5.83	1.0E-117	AB050146.1	EST_HUMAN	wp83607.x1 NC1 CGAP 3m5c Homo sapiens cDNA clone DGBAE01 6'
6837	16716	29508	1.7	1.0E-117	10834689.NT	EST_HUMAN	OT76065 KIAA0477 PROTEIN ;
6837	16716	29509	1.7	1.0E-117	10834689.NT	EST_HUMAN	Homo sapiens neural cell adhesion molecule 1 (NCAM1), mRNA
7391	17228	27428	2.28	1.0E-117	10834689.NT	EST_HUMAN	Homo sapiens neural cell adhesion molecule 1 (NCAM1), mRNA
7635	17490	27700	1.31	1.0E-117	5E733022.1	EST_HUMAN	Human gene for very low density lipoprotein receptor, exon 11
8395	18262	28512	10.31	1.0E-117	W80606.1	EST_HUMAN	z883911.1 NH <sub>2</sub> MGCC 21 Homo sapiens cDNA clone IMAGE3843748 5'
8595	18402	28732	3.96	1.0E-117	AB011544.1	EST_HUMAN	z883911.1 NH <sub>2</sub> MGCC 21 Homo sapiens cDNA clone IMAGE3843748 5'
8595	18402	28733	3.96	1.0E-117	AB011544.1	EST_HUMAN	g0M14210 BONE PROTEOGLYCAN II PRECURSOR (HUMAN);
8698	18610	28874	15.63	1.0E-117	BE230666.1	EST_HUMAN	Homo sapiens mRNA for NCGF8, partial cds
8872	19634	28974	2.22	1.0E-117	4501848.NT	EST_HUMAN	601186203F1 NH <sub>2</sub> MGCC 3 Homo sapiens cDNA clone IMAGE3544296 5'
8872	19634	28975	2.22	1.0E-117	4501848.NT	EST_HUMAN	Homo sapiens ATP-binding cassette, sub-family A (ABC1), member 3 (ABC3), mRNA
94	10030	19853	8.94	1.0E-118	AF101500.1	NT	Homo sapiens RSP-C181 mRNA, complete cds
94	10030	19853	8.94	1.0E-118	AF101500.1	NT	DKFZP434056.J1 434 (synonym: hies3) Homo sapiens cDNA clone DKFZ2434056 5'
908	10074	19850	2.98	1.0E-118	AL045894.1	EST_HUMAN	Homo sapiens hypothetical protein (D3328E1B.C1.1), mRNA
908	10074	19850	2.98	1.0E-118	AL045894.1	EST_HUMAN	Homo sapiens aha oculis homeobox (Drosophila) homolog 1 (SIX1) mRNA
925	12680	20667	0.06	1.0E-118	5174080.NT	EST_HUMAN	001281647F1 NH <sub>2</sub> MGCC 44 Homo sapiens cDNA clone IMAGE3604019 5'
2165	12073	21975	2.39	1.0E-118	BE389705.1	EST_HUMAN	001281647F1 NH <sub>2</sub> MGCC 44 Homo sapiens cDNA clone IMAGE3604019 5'
2165	12073	21976	2.39	1.0E-118	BE389705.1	EST_HUMAN	001281647F1 NH <sub>2</sub> MGCC 44 Homo sapiens cDNA clone IMAGE3604019 5'
2180	12073	21977	2.39	1.0E-118	BE389705.1	EST_HUMAN	EST363799 IMAGE resequences, MAG8 Homo sapiens cDNA
2281	12165	21977	3.77	1.0E-118	AW951729.1	EST_HUMAN	Human breakpoint cluster region (BOR) gene, complete cds
2711	12574	22465	2.38	1.0E-118	U07000.1	NT	Human breakpoint cluster region (BOR) gene, complete cds
2711	12574	22465	2.38	1.0E-118	U07000.1	NT	Human breakpoint cluster region (BOR) gene, complete cds
3066	12893	22887	3.73	1.0E-118	V13832.1	NT	Homo sapiens PRKY exon 7
3159	13084	22887	4.51	1.0E-118	AB347394.1	EST_HUMAN	qp01005.x1 NC1 CGAP_KG5 Homo sapiens cDNA clone IMAGE1919769 3'
3159	13084	22888	4.51	1.0E-118	AB347394.1	EST_HUMAN	qp01005.x1 NC1 CGAP_KG5 Homo sapiens cDNA clone IMAGE1919769 3'
3098	13004	23679	7.67	1.0E-118	D23660.1	NT	Human mRNA for ribosomal protein, complete cds
5329	15249	25053	2.02	1.0E-118	AF142624.1	NT	Homo sapiens calcium channel gamma 4 subunit (CACNG4) gene, exon 3
5329	15249	25054	2.02	1.0E-118	AF142624.1	NT	Homo sapiens calcium channel gamma 4 subunit (CACNG4) gene, exon 3
5620	15535	26620	1.88	1.0E-118	11400784.NT	NT	Homo sapiens transient receptor potential channel 5 (TRPC5), mRNA
6020	15524	26054	1.87	1.0E-118	4657732.NT	NT	Homo sapiens leucine transforming growth factor beta binding protein 2 (LTBP2) mRNA
6020	15524	26055	1.87	1.0E-118	4657732.NT	NT	Homo sapiens latent transforming growth factor beta binding protein 2 (LTBP2) mRNA

Table 4

### Single Exon Probes Expressed in Heart

Probe Seq ID NO:	Exon Seq ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) HT -BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Description
6482	16341	26509	4.13	1.05E-118	114181000	NT	Homo sapiens chromosome 2 open reading frame 3 (C2ORF3), mRNA
6948	16326	26722	2.23	1.05E-118	BE781223.1	EST_HUMAN	801469168P1 NIH_MGC_07 Homo sapiens cDNA clone IMAGE:3872247.5
6884	16763	26961	7.81	1.05E-118	BE062655.1	EST_HUMAN	QV0-810235-060200-497-H03 BT0283 Homo sapiens cDNA
6884	16763	26961	7.81	1.05E-118	BE062655.1	EST_HUMAN	QV0-810235-060200-497-H03 BT0283 Homo sapiens cDNA
6988	16767	26954	1.34	1.05E-118	AA443024.1	EST_HUMAN	2588407.1 Scores, NHHPFU, S1 Homo sapiens cDNA clone IMAGE:811789.5
6988	16767	26954	1.34	1.05E-118	AA443024.1	EST_HUMAN	2588407.1 Scores, NHHPFU, S1 Homo sapiens cDNA clone IMAGE:811789.5
6988	16767	26954	1.34	1.05E-118	AA443024.1	EST_HUMAN	2588407.1 Scores, NHHPFU, S1 Homo sapiens cDNA clone IMAGE:811789.5
7036	16912	27100	1.16	1.05E-118	AB002381.1	NT	Human mRNA for KIAA0383 gene, partial cds
7036	16912	27101	1.16	1.05E-118	AB002381.1	NT	Human mRNA for KIAA0383 gene, partial cds
7062	16936	27128	1.28	1.05E-118	4587732	EST_HUMAN	Homo sapiens latent transforming growth factor beta binding protein 2 (LTBP2) mRNA
7062	16936	27128	1.28	1.05E-118	4587732	EST_HUMAN	Homo sapiens latent transforming growth factor beta binding protein 2 (LTBP2) mRNA
7062	16936	27130	1.28	1.05E-118	4587732	EST_HUMAN	Homo sapiens latent transforming growth factor beta binding protein 2 (LTBP2) mRNA
7223	17100	27289	5.71	1.05E-118	BE267134.1	EST_HUMAN	801744665P2 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3160502.5
7688	17766	28027	1.18	1.05E-118	BF165407.1	EST_HUMAN	7177609.1 NC_CGAP_Bm2d Homo sapiens cDNA clone IMAGE:3564785.5 similar to SW_ZP594_HUMAN
6988	18445	28737	3.06	1.05E-118	AA315007.1	EST_HUMAN	EST1186814 HGC cell line (maltastate to liver in mouse) II Homo sapiens cDNA 5' end similar to dynain, light chain 1, cytoplasmic
8847	18859	28947	1.76	1.05E-118	BF033687.1	EST_HUMAN	QV0-UN0091-120900-385-612 UN0091 Homo sapiens cDNA
8847	18859	28948	1.76	1.05E-118	BF033687.1	EST_HUMAN	QV0-UN0091-120900-385-612 UN0091 Homo sapiens cDNA
741	10972	20568	1.91	1.05E-119	AF170462.1	NT	Homo sapiens chloride channel CLC4 (CLC4), complete cds
1021	12693	20781	1.56	1.05E-119	7705007	NT	Homo sapiens OGI-105 protein (LOC51011), mRNA
1891	11766	21663	2.06	1.05E-119	AB023147.1	NT	Homo sapiens mRNA for KIAA0930 protein, partial cds
3094	12991	22763	1.81	1.05E-119	8022205	NT	Homo sapiens hypothetical protein FLJ10592 (FLJ10592), mRNA
3202	13126	22763	1.08	1.05E-119	AA016760.1	EST_HUMAN	est0065.1 NC_CGAP_Lu5 Homo sapiens cDNA clone IMAGE:165624.3 similar to WIP-EC4.6.2
3870	13751	23573	1.15	1.05E-119	4584116	NT	Homo sapiens glutamate receptor, binding 5, isoform 1 (GRBK1) mRNA
9111	14979	24753	0.95	1.05E-119	AA073941.1	EST_HUMAN	TB14F03 Chromosome 7 Fetal Brain cDNA Library Homo sapiens cDNA clone TB14F03
9272	16164	24966	2.46	1.05E-119	AU133396.1	EST_HUMAN	AU133399 NT_ZP44 Homo sapiens cDNA clone NT_ZP44-001691.5
5282	15204	24980	14.83	1.05E-119	M69914.1	NT	Human neurotrophin (NFI) gene, complete cds
5285	16207	24984	3.32	1.05E-119	BE639121.1	EST_HUMAN	RC1-NN0075-250600-018-005 NN0073 Homo sapiens cDNA
5336	15256	25079	2.24	1.05E-119	AV69373.1	EST_HUMAN	AV693731 OKC Homo sapiens cDNA clone GK0D180.5
5726	15933	25914	7.19	1.05E-119	AF190703.1	EST_HUMAN	q977699.1 Scores, flat, heart NBH18W Homo sapiens cDNA clone IMAGE:1705128.5 similar to SW_K1C1_MOUSE_P02935 KERATIN, TYPE I CYTOSKELETAL 10 ; Human c-fos-like proto-oncogene
5687	15793	26514	2.70	1.05E-119	Q00292.1	NT	Human c-fos-like proto-oncogene
5905	15625	26526	4.26	1.05E-119	AF071403.1	EST_HUMAN	EST338625865 AGE sequences, MAGM Homo sapiens cDNA
5381	15243	26403	1.42	1.05E-119	BE768944.1	EST_HUMAN	Q01592005P1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3942681.5

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) HR BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7883	17733	27877	1.48	1.0E-119	AA665124.1	EST_HUMAN	cd3206.17 NC1 CG3.5_GCB1 Homo sapiens cDNA clone IMAGE:814977 5'
7958	17848	28069	1.42	1.0E-119	AF293701.1	NT	human partial L12RB1 gene for L12 receptor beta1 chain, exons 16-17
8935	18407		9.72	1.0E-119	BJ569571.1	EST_HUMAN	002180072F1 NIH_MGC_45 Homo sapiens cDNA clone IMAGE:4310853 5'
6948	19871		1.37	1.0E-119	AW847519.1	EST_HUMAN	RC3-C70212-2/0659-011-403 C70212 Homo sapiens cDNA
237	10205	20022	1.4	1.0E-120	AB018301.1	NT	Homo sapiens mRNA for KIA00759 protein, partial cds
298	10262	20082	1.34	1.0E-120	45073334	EST_HUMAN	Homo sapiens dynactin 1 (SYNU1) mRNA
1025	10643	20787	1.87	1.0E-120	AF248540.1	NT	Homo sapiens intercalin 2 (SH3D1B) mRNA, complete cds
1025	10943	20788	1.87	1.0E-120	AF248540.1	NT	Homo sapiens intercalin 2 (SH3D1B) mRNA, complete cds
1405	11311	21172	4.53	1.0E-120	N44873.1	EST_HUMAN	W4501.2.1 Soares melanocyte 2N6-HM Homo sapiens cDNA clone IMAGE:237669 5'
1533	11487	21343	3.97	1.0E-120	AF167708.1	NT	Homo sapiens cyclin-rich repeat-containing protein S52 precursor, mRNA, complete cds
2060	11960	21847	0.9	1.0E-120	AB011369.1	NT	Homo sapiens gene for AF-4, complete cds
2060	11950	21848	0.9	1.0E-120	AB011369.1	NT	Homo sapiens gene for AF-4, complete cds
2482	12958	22250	0.84	1.0E-120	4756124	EST_HUMAN	Homo sapiens aquaporin 1 (AQP1), splice variant 1, mRNA
3297	10262	20982	1.13	1.0E-120	45073334	NT	Homo sapiens synaptobrevin 1 (SYNU1) mRNA
4390	14159	23935	1.17	1.0E-120	AF564903.1	NT	Homo sapiens cAMP-specific phosphodiesterase 8A (PDE8A) mRNA, partial cds
4390	14159	23937	1.17	1.0E-120	AF564903.1	NT	Homo sapiens cAMP-specific phosphodiesterase 8A (PDE8A) mRNA, partial cds
4563	14458	24242	2.79	1.0E-120	AF588433.1	NT	Homo sapiens stannocalcin (STC) gene, partial cds
4563	14458	24243	2.79	1.0E-120	AF588433.1	NT	Homo sapiens stannocalcin (STC) gene, partial cds
5108	15034	24801	0.86	1.0E-120	AF594533.1	EST_HUMAN	002180072F1 NIH_MGC_45 Homo sapiens cDNA clone IMAGE:1735681 3'
5508	15428	25488	13.84	1.0E-120	BF566222.1	EST_HUMAN	002180072F1 NIH_MGC_42 Homo sapiens cDNA clone IMAGE:4300174 3'
5508	15428	25488	13.84	1.0E-120	BF566222.1	EST_HUMAN	002180072F1 NIH_MGC_42 Homo sapiens cDNA clone IMAGE:4300174 5'
6059	16528	26466	1.49	1.0E-120	D34816.1	NT	Human TEXAS1 gene for thrombospondin synthesis, exon 7
6069	16488	26574	1.67	1.0E-120	Y00067.1	NT	Human gene for neurofilament subunit M (NF-M)
6069	16488	26575	1.67	1.0E-120	Y00067.1	NT	Human gene for neurofilament subunit M (NF-M)
6680	16729	26924	2.44	1.0E-120	BF337898.1	EST_HUMAN	002033532F1 NC1_GGAP_Brd4 Homo sapiens cDNA clone IMAGE:183333 5'
6680	16729	26924	2.44	1.0E-120	AB007984.1	NT	Homo sapiens mRNA, chromosome 1 specific transcript KIA0496
6922	16777	26972	2.43	1.0E-120	AB007984.1	NT	Homo sapiens mRNA, chromosome 1 specific transcript KIA0496
6922	16800	26993	1.33	1.0E-120	AB007984.1	NT	Homo sapiens mRNA for KIA0496 protein, partial cds
7470	17330	27355	4.54	1.0E-120	BE392102.1	EST_HUMAN	001307739F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:392544 5'
7470	17330	27355	4.54	1.0E-120	BE392102.1	EST_HUMAN	001307739F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:392544 5'
7617	17468	27887	4.72	1.0E-120	BF309541.1	EST_HUMAN	AU1888509F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4122876 5'
7628	17477	27898	7.31	1.0E-120	AF13205.1	EST_HUMAN	AU133205.1 NT2P41 Homo sapiens cDNA clone NT2P41.001541 5'
7798	17848	27885	2.93	1.0E-120	AB290001.1	NT	Homo sapiens mRNA for KIA1077 protein, partial cds
8459	18342	28807	6.4	1.0E-120	BC286387.1	EST_HUMAN	001176227F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3932015 5'

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NC:	Exon SEQ ID NC:	ORF SEQ ID NC:	Expression Signal	Most Similar BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8814	18722	26013	2.07	1.0E-120	U94774.1	NT	Human muscle glycogen phosphorylase (PYGM) gene, 5'UTR and exon 1
9456	19111	26288	1.36	1.0E-120	11417862	NT	Homo sapiens calcitriol binding protein 1 (KIAA0330), mRNA
67	10052	19807	1.04	1.0E-121	Y18000.1	NT	Homo sapiens NF2 gene
374	10328	20151	0.98	1.0E-121	AU134658.1	EST_HUMAN	AUT34653 PLACE1 Homo sapiens cDNA clone PLACE103969 5'
707	12674	20466	1.23	1.0E-121	5932162	NT	Homo sapiens TNF receptor-associated factor 1 (TRAF1) mRNA
1556	11461	21319	0.99	1.0E-121	AB011153.1	NT	Homo sapiens mRNA for KIAA0381 protein, partial cds
1923	11818	21697	0.89	1.0E-121	4755139	NT	Homo sapiens Inositol polyphosphate-4-phosphatase, type I, 107kD (INPP4A), splice variant a, mRNA
1923	11818	21698	0.89	1.0E-121	4755139	NT	Homo sapiens Inositol polyphosphate-4-phosphatase, type I, 107kD (INPP4A), splice variant a, mRNA
2056	11945	21841	1.17	1.0E-121	750351.1	NT	Homo sapiens melastatin glutamate receptor 1 beta (mGLR1beta) mRNA, complete cds
2530	12004	22295	1.05	1.0E-121	BF344378.1	EST_HUMAN	60201759FT NCI CGAP Bmi4 Homo sapiens cDNA clone IMAGE:4150285 5'
2530	12004	22295	1.05	1.0E-121	BF344378.1	EST_HUMAN	60201759FT NCI CGAP Bmi4 Homo sapiens cDNA clone IMAGE:4150285 5'
3542	12698	22763	3.08	1.0E-121	Y18208.1	NT	Homo sapiens HD3 gene for hair keratin, exons 1 to 9
3542	12698	22764	3.06	1.0E-121	Y18208.1	NT	Homo sapiens HD3 gene for hair keratin, exons 1 to 9
3492	13408	23213	1.06	1.0E-121	AB037788.1	NT	Homo sapiens mRNA for KIAA1337 protein, partial cds
3492	13408	23214	1.06	1.0E-121	AB037788.1	NT	Homo sapiens mRNA for KIAA1337 protein, partial cds
3524	13538	23325	6.61	1.0E-121	AF160162.2	NT	Homo sapiens adaptor-related protein complex AP-4 epsilon subunit mRNA, complete cds
4238	14134	23910	1.21	1.0E-121	A0363594.1	EST_HUMAN	g95767.1X1 NCI CGAP Pten Homo sapiens cDNA clone IMAGE:205417 3'
4901	14781	24559	2.56	1.0E-121	X97637.1	NT	H. sapiens ECE-1 gene (exon 17)
5050	14922	24895	1.03	1.0E-121	A0304151.1	EST_HUMAN	GM-BT043-500/99-078 BT043 Homo sapiens cDNA
6932	16512	26701	2.58	1.0E-121	D84122.1	NT	Homo sapiens DNA for prolidyl synthase, exon 8
6932	16512	26702	2.58	1.0E-121	D84122.1	NT	Homo sapiens DNA for prolidyl synthase, exon 8
8157	18045	28207	4.44	1.0E-121	11427788	NT	Homo sapiens COX11 (yeast) homologue, cytochrome c oxidase assembly protein (COX11), mRNA
8163	18051	28303	2.28	1.0E-121	AF064200.1	NT	Homo sapiens UDP-glucuronosyltransferase 2B4 precursor (UGT2B4) mRNA, UGT2B4*E488 allele, complete cds
8336	18213	28495	4.91	1.0E-121	7330334	NT	Homo sapiens chloride intracellular channel 4 like (CLIC4), mRNA
8363	18240	28489	3.48	1.0E-121	N50924.1	EST_HUMAN	Y97540.1 at Scnec test liver spleen 1NfLS Homo sapiens cDNA clone IMAGE:248428 3'
267	10232	20047	3.86	1.0E-122	1150876	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1), mRNA
333	10292	20107	2.22	1.0E-122	AF114888.1	NT	Homo sapiens Intersectin short isoform (ITSN) mRNA, complete cds
355	10812	20133	1.54	1.0E-122	11528176	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1), mRNA
864	10790	20841	2.85	1.0E-122	AF114888.1	NT	Homo sapiens Intersectin short isoform (ITSN) mRNA, complete cds
1201	11111	20957	3.41	1.0E-122	M20707.1	NT	Human kappa-immunoglobulin germline pseudogene (Chr22.4) variable region (subgroup V kappa II)

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Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Mean Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1697	11569	21435	1.32	1.0E-123	AF167706.1	NT	Homo sapiens cyclin-like repeat-containing protein S82 precursor, mRNA, complete cds
1698	11569	21465	2.01	1.0E-122	11141424	NT	Homo sapiens collagen, type XII, alpha 1 (COL12A1), mRNA
1699	11569	21465	2.01	1.0E-122	11141424	NT	Homo sapiens collagen, type XII, alpha 1 (COL12A1), mRNA
1699	11569	21465	2.01	1.0E-122	11141424	NT	Homo sapiens collagen, type XII, alpha 1 (COL12A1), mRNA
1772	11671	21549	5.91	1.0E-122	BE00624.1	EST_HUMAN	601497032F1 NH MGCG 70 Homo sapiens cDNA clone IMAGE:3800368 5'
1772	11671	21549	5.91	1.0E-122	BE00624.1	EST_HUMAN	601497032F1 NH MGCG 70 Homo sapiens cDNA clone IMAGE:3800368 5'
2441	12318	22216	10.56	1.0E-123	BF031670.1	EST_HUMAN	6011805173F1 NH MGCG 19 Homo sapiens cDNA clone IMAGE:4125234 5'
2441	12318	22216	10.56	1.0E-123	BF031670.1	EST_HUMAN	6011805173F1 NH MGCG 19 Homo sapiens cDNA clone IMAGE:4125234 5'
4738	14623	24409	1.82	1.0E-122	4502166	NT	Homo sapiens amyloid beta1 (A4) precursor protein (protease resistant, Alzheimer's disease) (APP), mRNA
4918	14797	25390	4.12	1.0E-122	AV504643.1	EST_HUMAN	U187.BNC.34.03.04.U1.1 NH MGCG 50 Homo sapiens cDNA clone IMAGE:3079948 5'
6051	15337	25390	8.41	1.0E-123	BE256303.1	EST_HUMAN	601133507F1 NH MGCG 16 Homo sapiens cDNA clone IMAGE:3354332 5'
7219	17059	27266	1.36	1.0E-122	11424216	NT	Homo sapiens fetal giant giant larvae (Drosophila) homolog 2 (LLGL2), mRNA
8098	18899	27266	4.36	1.0E-122	11416107	NT	Homo sapiens phosphoenolpyruvate 1 (PEPCK), mRNA
181	10163	19988	1.07	1.0E-123	U31519.1	NT	Human phosphoenolpyruvate carboxykinase (PEPCK) gene, promoter region and partial cds
751	10581	20817	1.72	1.0E-123	BF345274.1	EST_HUMAN	00218038F1 NCL COAP_Bmt37 Homo sapiens cDNA clone IMAGE:4153570 5'
751	10581	20817	1.72	1.0E-123	BF345274.1	EST_HUMAN	00218038F1 NCL COAP_Bmt37 Homo sapiens cDNA clone IMAGE:4153570 5'
989	10916	20780	3.79	1.0E-123	AL163249.2	NT	Homo sapiens chromosome 21 segment P51-1049
1005	10523	20767	6.06	1.0E-123	5803114	NT	Homo sapiens inner membrane protein, mitochondrial (mitofilin) (IMMT), mRNA
1218	11126	20576	3.35	1.0E-123	4903918	NT	Homo sapiens phosphatidylinositol-4-phosphate 5-kinase, type II, beta (PIP5K2B) mRNA, and translated products
1218	11126	20577	3.35	1.0E-123	4903918	NT	Homo sapiens phosphatidylinositol-4-phosphate 5-kinase, type II, beta (PIP5K2B) mRNA, and translated products
1430	11344	21211	1.76	1.0E-123	AL388841.1	NT	Homo sapiens perlecan mRNA for immunoglobulin kappa chain variable region (IGVK gene), sample GN02
2052	11942	21937	2.05	1.0E-123	M55419.1	NT	Human amelogenin (AMELV) gene, 3' end of cds
2052	11942	21938	2.98	1.0E-123	M55419.1	NT	Human amelogenin (AMELV) gene, 3' end of cds
2052	11942	21939	2.98	1.0E-123	M55419.1	NT	Human amelogenin (AMELV) gene, 3' end of cds
2297	12151	25591	4.5	1.0E-123	7709602	NT	Homo sapiens RAB9-like protein (LOC51209), mRNA
5344	15065	25591	1.75	1.0E-123	342191	NT	Homo sapiens retinoid-binding protein (CRALBP) gene, complete cds
5344	15065	25592	1.76	1.0E-123	342191	NT	Homo sapiens retinoid-binding protein (CRALBP) gene, complete cds
5425	15346	25400	1.26	1.0E-123	BE769748.1	EST_HUMAN	601891008F1 NH MGCG 7 Homo sapiens cDNA clone IMAGE:3945433 5'
9663	15769	26523	2.27	1.0E-123	AJ118435.1	EST_HUMAN	AJ118435 HEMBA1 Homo sapiens cDNA clone IMAGE:3945433 5'
6166	16071	26221	1.96	1.0E-123	U42222.1	NT	Human growth hormone releasing hormone gene, exon 7
6603	15065	26549	1.96	1.0E-123	BE263001.1	EST_HUMAN	601152810F1 NH MGCG 19 Homo sapiens cDNA clone IMAGE:3509162 5'
7362	17510	27517	4.14	1.0E-123	AB007923.1	NT	Homo sapiens mRNA for KIA0354 protein, partial cds

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Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7471	17331	27537	12.23	1.0E-124	U08623.1	NT	Cryoglobulinemic New Zealand white elongation factor 1 alpha (Rab46a2) mRNA, complete cds
8898	18163	29057	5	1.0E-124	BF077292.1	EST_HUMAN	602089791F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:426879 5'
8898	18163	29057	5	1.0E-124	BF077292.1	EST_HUMAN	602089791F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:426879 5'
288	10233	20048	2.81	1.0E-124	4507500	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1) mRNA
288	10233	20049	1.1	1.0E-124	4507500	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1) mRNA
273	10230		1.98	1.0E-124	087676.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
477	10421	20238	2.11	1.0E-124	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21CQ46
676	10609	20429	2.03	1.0E-124	AA367551.1	EST_HUMAN	Z81104.11 Stratiotes schizo brain S11 Homo sapiens cDNA clone IMAGE:728718 5' similar to TR-G300442
742	10659	20430	2.03	1.0E-124	AA367551.1	EST_HUMAN	Z81104.11 Stratiotes schizo brain S11 Homo sapiens cDNA clone IMAGE:728718 5' similar to TR-G300442
791	10720	20561	3.87	1.0E-124	AF15954.1	EST_HUMAN	G300442 POL-REVERSE TRANSCRIPTASE HOMOLOG (RETROVIRAL ELEMENT) ;
898	10812	20561	1.05	1.0E-124	4507500	NT	G300442 POL-REVERSE TRANSCRIPTASE HOMOLOG (RETROVIRAL ELEMENT) ;
1323	11200	21056	2.89	1.0E-124	11410022	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1) mRNA
1324	11231	21088	5.54	1.0E-124	AF274892.1	NT	Homo sapiens rho finger protein (RNF), mRNA
1324	11231	21087	5.54	1.0E-124	AF274892.1	NT	Homo sapiens rho finger protein (RNF), mRNA
1773	11672	21950	2.35	1.0E-124	AF131712.1	NT	Homo sapiens glucose transporter 3 gene, exon 9, 10, and complete cds
2016	11607	21797	2.23	1.0E-124	AF131712.1	EST_HUMAN	Homo sapiens glucose transporter 3 gene, exon 9, 10, and complete cds
2408	12289	21622	0.85	1.0E-124	AB024096.1	NT	601407161F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:369364 5'
3319	13240	23043	0.85	1.0E-124	4504116	NT	Homo sapiens gene for B120, exon 11
3446	13363	23160	0.06	1.0E-124	S78654.1	NT	Homo sapiens glutamate receptor, ionotropic, kainate 1 (GRIK1) mRNA
3446	13363	23170	0.06	1.0E-124	S78654.1	NT	Homo sapiens ATP-sensitive inwardly rectifying K-channel subunit (KCNJ6BIR1) gene, exon
3968	13512	23300	2.95	1.0E-124	X13794.1	NT	Homo sapiens ATP-sensitive inwardly rectifying K-channel subunit (KCNJ6BIR1) gene, exon
3825	13737	23328	1.00	1.0E-124	4507500	NT	Homo sapiens ATP-sensitive inwardly rectifying K-channel subunit (KCNJ6BIR1) gene, exon
3983	13890	23066	1.16	1.0E-124	4504116	NT	Homo sapiens ATP-sensitive inwardly rectifying K-channel subunit (KCNJ6BIR1) gene, exon
4639	14527	24315	1.58	1.0E-124	AB024096.1	NT	Homo sapiens ATP-sensitive inwardly rectifying K-channel subunit (KCNJ6BIR1) gene, exon
4850	14731		1.12	1.0E-124	M18176.1	NT	Homo sapiens ATP-sensitive inwardly rectifying K-channel subunit (KCNJ6BIR1) gene, exon
5039	14911	24855	2.72	1.0E-124	AI204593.1	EST_HUMAN	Homo sapiens ATP-sensitive inwardly rectifying K-channel subunit (KCNJ6BIR1) gene, exon
5240	15164	24934	8.97	1.0E-124	892237	NT	Human fibronectin gene extra type III repeat (EDU), exon x+1
5520	15505	25580	6.43	1.0E-124	BF085135.1	EST_HUMAN	qf9505.X1 Scores, testis, NIH Homo sapiens cDNA clone IMAGE:1754069 3'
6165	16070	26220	3.31	1.0E-124	BF085135.1	EST_HUMAN	Homo sapiens hypothetical protein FLJ10300 (FLJ10300) mRNA
6605	16984	28874	5.66	1.0E-124	11171.1	NT	60212454F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:1281835 5'
						NT	Musculus mRNA for rous3 gene
						NT	Homo sapiens ribosomal protein L5 (RPL5) mRNA

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6930	19806	27002	1.35	1.0E-124	AW012106.1	EST_HUMAN	Igf4d9.9 x1 NCI CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2953240 3' similar to TR:095162
6930	19808	27003	1.35	1.0E-124	AW012108.1	EST_HUMAN	O95169 PEROXISOMAL SHORT-CHAIN ALCOHOL DEHYDROGENASE ;
7469	17326	27532	2.44	1.0E-124	AV45633.1	EST_HUMAN	O95169 PEROXISOMAL SHORT-CHAIN ALCOHOL DEHYDROGENASE ;
7469	17326	27533	2.44	1.0E-124	AV45633.1	EST_HUMAN	AV45633 GLC Homo sapiens cDNA clone GLCACE04 3'
7542	17393	27804	7.8	1.0E-124	AI767133.1	EST_HUMAN	W63002.x1 NCI CGAP_Kid12 Homo sapiens cDNA clone GLCACE04 3'
7542	17393	27805	7.8	1.0E-124	AI767133.1	EST_HUMAN	W63002.x1 NCI CGAP_Kid12 Homo sapiens cDNA clone IMAGE:2400391 3'
7776	17526	27752	1.25	1.0E-124	AW503755.1	EST_HUMAN	UHF-BNO-862-04-24U117 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3077648 5'
8404	18260	28532	2.25	1.0E-124	U54776.1	EST_HUMAN	Human muscle phosphofructase (PFKM) gene, exon 8 through 17
8545	18509	28788	2.25	1.0E-124	U54776.1	EST_HUMAN	H55505.x1 Soares, NTL_1_GBC_S1 Homo sapiens cDNA clone IMAGE:2900900 3'
8767	17916	28162	1.87	1.0E-124	AI448455.1	EST_HUMAN	YKFS PROTEIN ;
8767	17916	28163	1.87	1.0E-124	AI448455.1	EST_HUMAN	YKFS PROTEIN ;
9173	10609	20429	3.98	1.0E-124	AA397551.1	EST_HUMAN	G350442 POL-REVERSE TRANSCRIPTASE HOMOLOG (RETROVIRAL ELEMENT) ;
9173	10609	20430	3.98	1.0E-124	AA397551.1	EST_HUMAN	381604.11 Simulium vittatum brain S11 Homo sapiens cDNA clone IMAGE:728710 5' similar to TR:G300462
9340	19203	25003	1.90	1.0E-124	AI177802	NT	G350442 POL-REVERSE TRANSCRIPTASE HOMOLOG (RETROVIRAL ELEMENT) ;
9340	19203	25005	1.90	1.0E-124	AI177802	NT	G350442 POL-REVERSE TRANSCRIPTASE HOMOLOG (RETROVIRAL ELEMENT) ;
316	10278		5.41	1.0E-125	AR03598.1	NT	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
420	9997	19778	3.92	1.0E-125	AR03598.1	EST_HUMAN	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
820	10505	20377	1.83	1.0E-125	AI170622.1	EST_HUMAN	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
820	10505	20378	1.83	1.0E-125	AI170622.1	EST_HUMAN	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
711	10643	20469	1.24	1.0E-125	AF264750.1	NT	HA0086 Homo sapiens field liver cDNA library Homo sapiens cDNA
842	10769	20619	2.13	1.0E-125	AA428183.1	EST_HUMAN	HA0086 Homo sapiens field liver cDNA library Homo sapiens cDNA
992	10605	20760	1.93	1.0E-125	AI183210.2	NT	HA0086 Homo sapiens field liver cDNA library Homo sapiens cDNA
1338	11050	20890	1.83	1.0E-125	7862279	NT	HA0086 Homo sapiens field liver cDNA library Homo sapiens cDNA
1548	12700	21414	1.08	1.0E-125	7861607	NT	HA0086 Homo sapiens field liver cDNA library Homo sapiens cDNA
1769	11669	21545	3.81	1.0E-125	AF015450.1	NT	HA0086 Homo sapiens field liver cDNA library Homo sapiens cDNA
1769	11669	21546	3.81	1.0E-125	AF015450.1	NT	HA0086 Homo sapiens field liver cDNA library Homo sapiens cDNA

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2495	12332	22228	1.15	1.0E-125	AA042813.1	EST_HUMAN	2653037 at Scort, pregnant, uterus, NBHPU Homo sapiens cDNA clone IMAGE:486540 3' similar to
2591	12424	22315	1.95	1.0E-125	4504696	NT	gkx95897, cds1 OLFATORY RECEPTOR-LIKE PROTEIN HOMPOTE (HUMAN);
2651	12424	22316	1.95	1.0E-125	4504696	NT	Homo sapiens inhibin, alpha (INH) mRNA
2651	12427	22320	2.45	1.0E-125	AI723966.1	EST_HUMAN	Homo sapiens inhibin, alpha (INH) mRNA
4450	14344	24136	1.68	1.0E-125	11423114	NT	dl64d02.26 NC1, OGAP, K165 Homo sapiens cDNA clone IMAGE:1471779 3'
4450	14344	24137	1.68	1.0E-125	11423114	NT	Homo sapiens zinc finger protein, ZNF287 (ZNF287), mRNA
4516	14409	24195	0.94	1.0E-125	BE31512.1	EST_HUMAN	Homo sapiens zinc finger protein, ZNF287 (ZNF287), mRNA
5591	15469	25573	1.41	1.0E-125	11436448	NT	601141152F1 NIH, MGC, 9 Homo sapiens cDNA clone IMAGE:3140780 5'
5612	15527	25610	3.44	1.0E-125	BE32990.1	EST_HUMAN	Homo sapiens KIAA0995 protein (KIAA0995), mRNA
5695	15670	25693	1.48	1.0E-125	BE62326.1	EST_HUMAN	601433472F1 NIH, MGC, 72 Homo sapiens cDNA clone IMAGE:3915952 5'
5695	15670	25693	1.48	1.0E-125	BE62326.1	EST_HUMAN	60133926F1 NIH, MGC, 44 Homo sapiens cDNA clone IMAGE:3685790 5'
6201	15661	26093	6.36	1.0E-125	X03427.1	NT	60133926F1 NIH, MGC, 44 Homo sapiens cDNA clone IMAGE:3685790 5'
6201	15661	26094	6.36	1.0E-125	X03427.1	NT	Homo sapiens [GF-I] gene, exon 5
6201	15661	26094	6.36	1.0E-125	X03427.1	NT	Homo sapiens [GF-I] gene, exon 5
6674	16851	27043	1.22	1.0E-125	X03288.1	NT	Human chromosome 10 duplicated adrenoicidystrophy (ALD) gene segment containing exons 8-10
6674	16851	27044	1.22	1.0E-125	X03288.1	NT	Human chromosome 10 duplicated adrenoicidystrophy (ALD) gene segment containing exons 8-10
7272	17149	27343	4.31	1.0E-125	BE16190.1	EST_HUMAN	Q1V1HT0038-010500-191-4712 HT0038 Homo sapiens cDNA
7272	17149	27343	4.31	1.0E-125	BE16190.1	EST_HUMAN	Q1V1HT0038-010500-191-4712 HT0038 Homo sapiens cDNA
8009	17660	28211	3.16	1.0E-125	AF043493.1	NT	Homo sapiens HREL gene, exon 5
8162	18040	28289	1.86	1.0E-125	AW131202.1	EST_HUMAN	x59902.x1 NC1, OGAP, Gae4 Homo sapiens cDNA clone IMAGE:2622363 3' similar to TR:Q13294 Q13294
8162	18040	28290	1.86	1.0E-125	AW131202.1	EST_HUMAN	LAMBDAIOTA PROTEIN KINASE C-INTERACTING PROTEIN, [1];
8478	18351	28616	6.13	1.0E-125	AB014867.1	NT	x59902.x1 NC1, OGAP, Gae4 Homo sapiens cDNA clone IMAGE:2622363 3' similar to TR:Q13294 Q13294
8609	18476	29748	2.92	1.0E-125	7699505	NT	LAMBDAIOTA PROTEIN KINASE C-INTERACTING PROTEIN, [1];
8615	18482	29748	2.92	1.0E-125	AF026029.1	NT	Homo sapiens myosin, heavy polypeptide 1, skeletal muscle, adult (MYH1), mRNA
8704	18522	29804	2.49	1.0E-125	AW812890.1	EST_HUMAN	Homo sapiens myosin, heavy polypeptide 1, skeletal muscle, adult (MYH1), mRNA
8703	18507	28896	4.36	1.0E-125	BE074267.1	EST_HUMAN	Homo sapiens p44K binding protein II (PABP2) gene, complete cds
8703	18507	28897	4.36	1.0E-125	BE074267.1	EST_HUMAN	RCV3-ST0186-250200-018-ct1 ST0186 Homo sapiens cDNA
8641	18749	29044	4.36	1.0E-125	AB014867.1	EST_HUMAN	QV3-B10569-020200-075-p09 B10569 Homo sapiens cDNA
757	10087	20325	0.85	1.0E-125	4759007	NT	QV3-B10569-020200-075-p09 B10569 Homo sapiens cDNA
760	10860	20328	1.2	1.0E-125	AB014867.1	NT	Homo sapiens CDC-like kinase (CLK) mRNA
760	10860	20328	1.2	1.0E-125	AB014867.1	NT	Human lamrin B1 chain gene, exon 20



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Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
901	10826	20670	2.03	1.0E-126	X89735.1	NT	H sapiens gene for alpha1-antitrypsin, exon 3
2632	12425	22317	6.24	1.0E-126	6332078	EST	Human sapiens RAN binding protein 2 (RANBP2), mRNA
3035	12963	22757	2.07	1.0E-126	AA160706.1	EST_HUMAN	z07205.1 Stragline pancreas (#637206) Homo sapiens cDNA clone IMAGE:562420 5'
3035	12963	22758	6.07	1.0E-126	AA160706.1	EST_HUMAN	z07205.1 Stragline pancreas (#637206) Homo sapiens cDNA clone IMAGE:562420 5'
3577	13491	23281	1.21	1.0E-126	X33941.1	NT	H sapiens DNA for liver cytochrome b5 pseudogene
3605	13510	23307	2.04	1.0E-126	765703.8	NT	Human sapiens death receptor 6 (DR6), mRNA
4677	14563	24366	0.96	1.0E-126	AF101108.1	NT	Human sapiens collagen type XI alpha-1 (COL11A1) gene, exon 83
4677	14563	24367	0.96	1.0E-126	AF101108.1	NT	Human sapiens collagen type XI alpha-1 (COL11A1) gene, exon 83
4728	14614	24400	1.57	1.0E-126	N34073.1	EST_HUMAN	z07808.1 Sources melanocyte 23A1M Homo sapiens cDNA clone IMAGE:287850 5'
5779	16686	25795	3.68	1.0E-126	AA460075.1	EST_HUMAN	TF-G149860 G149860 TITIN
5797	17033	25873	3.82	1.0E-126	AB040363.1	NT	Human sapiens mRNA for KIAA1525 protein, partial cds
5797	17033	25874	3.82	1.0E-126	AB040363.1	NT	Human sapiens mRNA for KIAA1525 protein, partial cds
6660	16540	26737	2.77	1.0E-126	X16503.1	NT	Human mRNA for ankyrin (variant 2.1)
8293	18114	28366	1.95	1.0E-126	BF68376.1	EST_HUMAN	002139130F1 NH_KJC-46 Homo sapiens cDNA clone IMAGE:538240 5'
8306	18620	28710	2.41	1.0E-126	BE561960.1	EST_HUMAN	001148040F1 NH_KJC-49 Homo sapiens cDNA clone IMAGE:3502129 5'
6635	15068	24890	4.38	1.0E-126	BE743922.1	EST_HUMAN	001577081F1 NH_KJC-9 Homo sapiens cDNA clone IMAGE:3929861 5'
165	10138	19954	3.59	1.0E-127	AB024597.1	NT	Human sapiens mRNA for casein kinase I epsilon, complete cds
165	10138	19955	3.59	1.0E-127	AB024597.1	NT	Human sapiens mRNA for casein kinase I epsilon, complete cds
196	10138	19954	2.31	1.0E-127	AB024597.1	NT	Human sapiens mRNA for casein kinase I epsilon, complete cds
196	10138	19955	2.31	1.0E-127	AB024597.1	NT	Human sapiens mRNA for casein kinase I epsilon, complete cds
272	10238	20395	2.35	1.0E-127	D87676.1	NT	Human sapiens DNA for amyloid precursor protein, complete cds
272	10238	20397	2.35	1.0E-127	D87676.1	NT	Human sapiens DNA for amyloid precursor protein, complete cds
893	10790	20540	1.32	1.0E-127	AF114483.1	NT	Human sapiens intercalin short isoform (ITSN) mRNA, complete cds
898	10823	20599	1.28	1.0E-127	AF114483.1	NT	Human sapiens intercalin short isoform (ITSN) mRNA, complete cds
1665	11567	21433	0.98	1.0E-127	X827033	NT	Human sapiens ubiquitin specific protease 8 (USP8) mRNA
2020	11911	21890	1.59	1.0E-127	5903065	NT	Human sapiens leukocyte immunoglobulin-like receptor, subfamily A (with TM domain), member 1 (LILRA1), mRNA
2020	11911	21891	1.59	1.0E-127	5903065	NT	Human sapiens leukocyte immunoglobulin-like receptor, subfamily A (with TM domain), member 1 (LILRA1), mRNA
2163	12044	21939	7.45	1.0E-127	4506820	NT	Human sapiens ribosomal protein L26 (RPL26) mRNA
2294	12175	22376	4.01	1.0E-127	AF245905.1	NT	Human sapiens adicain mRNA, complete cds
2595	12337	22330	2.78	1.0E-127	X12681.1	NT	Human mRNA for cytochrome b5
2579	12460	22341	0.95	1.0E-127	AA460181.1	EST_HUMAN	z03602.1 Sources, total, fetus_NH4HF8, 9w Homo sapiens cDNA clone IMAGE:760098 5'

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2579	12450	22342	0.56	1.0E-127	AA60131.1	EST_HUMAN	zkd502.1 Soares, Jolm, Jolm, MZHP-9. Jw Homo sapiens cDNA clone IMAGE:796068 5'
3740	13552	23435	0.85	1.0E-127	AW151207.1	EST_HUMAN	sub008.Y1 Schmeider field brain 00004 Homo sapiens cDNA clone IMAGE:278294 5' similar to
4026	13829	23706	1.09	1.0E-127	AF35180.1	NT	TRQ15170 Q15170 TRANSCRIPTION FACTOR S-HRELATED PROTEIN contains element MER22
4126	14028	23802	0.86	1.0E-127	AL163247.2	NT	repetitive element:
4160	14080	23933	21.46	1.0E-127	7709239	NT	Homo sapiens chromosome 21 segment HS210047
4160	14080	23934	21.46	1.0E-127	7709239	NT	Homo sapiens neuroblastoma-amplified protein LOC51584 mRNA
4160	14080	23935	21.46	1.0E-127	7709239	NT	Homo sapiens neuroblastoma-amplified protein LOC51584 mRNA
4395	14291	24075	0.92	1.0E-127	AF522207.1	NT	Homo sapiens cytochrome P450 reductase metabolizing protein P450RA-2 mRNA, complete cds
4499	14393	24178	4.16	1.0E-127	4609344	NT	Homo sapiens RAD1 (S. pombe) homologue (RAD1) mRNA, and translated products
4632	14426	24592	1.93	1.0E-127	AL163247.2	NT	Homo sapiens chromosome 21 segment HS210068
4679	14466	24592	0.96	1.0E-127	8612639	NT	Homo sapiens RhoG and YY1 binding protein (RYPB) mRNA
6548	16462	25533	3.72	1.0E-127	AB5764.1	NT	H. sapiens NOS2 gene, exon 3-6
5742	16560	25757	2.67	1.0E-127	764060.1	NT	H. sapiens TOF1 gene, exon 3-6
5916	16722	25935	0.76	1.0E-127	4604778	NT	Homo sapiens integrin, beta 3 (ITGB3) mRNA
6576	16436	26020	1.38	1.0E-127	11421914	NT	Homo sapiens Fendred syndrome (FOS) mRNA
6576	16436	26021	1.38	1.0E-127	11421914	NT	Homo sapiens Fendred syndrome (FOS) mRNA
7659	17409	27924	4.97	1.0E-127	AF274693.1	NT	Homo sapiens secretory pathway component Sec31B-1 mRNA, alternatively spliced, complete cds
7659	17409	27925	4.97	1.0E-127	AF274693.1	NT	Homo sapiens secretory pathway component Sec31B-1 mRNA, alternatively spliced, complete cds
7623	17773	28012	1.17	1.0E-127	11427235	NT	Homo sapiens Chediak-Higashi syndrome 1 (CHS1), mRNA
8469	18371	28934	6.74	1.0E-127	11417339	NT	Homo sapiens similar to head shock 70kD protein 9B (mortalin-2) (H. sapiens) LOC583184 mRNA
8469	18371	28935	6.74	1.0E-127	11417339	NT	Homo sapiens similar to head shock 70kD protein 9B (mortalin-2) (H. sapiens) LOC583184 mRNA
8568	18707	29001	2.46	1.0E-127	BE95416.1	EST_HUMAN	60143784FT NIH MGCC 72 Homo sapiens cDNA clone IMAGE:3919617 5'
8568	18707	29002	2.46	1.0E-127	BE95416.1	EST_HUMAN	60143784FT NIH MGCC 72 Homo sapiens cDNA clone IMAGE:3919617 5'
9397	10138	19654	1.66	1.0E-127	AB024597.1	NT	Homo sapiens mRNA for casein kinase I epsilon, complete cds
9397	10138	19655	1.66	1.0E-127	AB024597.1	NT	Homo sapiens mRNA for casein kinase I epsilon, complete cds
9396	19177	25776	2.21	1.0E-127	AB013961.1	NT	Homo sapiens gene for AF-6, complete cds
4632	10565	20214	4.46	1.0E-126	BE95981.1	EST_HUMAN	60127812FT NIH MGCC 20 Homo sapiens cDNA clone IMAGE:3818322 5'
1138	11052	20992	1.48	1.0E-126	4759081	NT	Homo sapiens chondroitin sulfate proteoglycan 2 (versican) (CSPG2) mRNA
1138	11052	20993	1.48	1.0E-126	4759081	NT	Homo sapiens chondroitin sulfate proteoglycan 2 (versican) (CSPG2) mRNA
2026	11916	21005	12.19	1.0E-126	U0253.1	NT	Human FAUHP pseudogenes, trinucleotide repeat regions
2026	11916	21006	12.19	1.0E-126	U0253.1	NT	Human FAUHP pseudogenes, trinucleotide repeat regions

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Table 4  
Single Exon Probes Expressed in Heart.

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2102	12149	21990	13.3	1.0E-128	4006718	NT	Homo sapiens ribosomal protein S2 (RPS2) mRNA
2395	12273		0.95	1.0E-128	11437485	NT	Homo sapiens chromatin-specific transcription elongation factor 140 Ido subunit (FACTP140) mRNA
3348	13268	23071	1.13	1.0E-128	AB033073.1	NT	Homo sapiens mRNA for KIAA1297 protein, partial cds
4595	14457	24245	5.48	1.0E-128	11429873	NT	Homo sapiens prospero-related homeobox 1 (PROX1) mRNA
5995	15771	25590	2.97	1.0E-128	11420905	NT	Homo sapiens phosphodiesterase 1C, calmodulin-dependent (PDE1C) mRNA
8140	19888	28123	7.23	1.0E-128	BF234345.1	EST_HUMAN	7980b70.x1 NCI CGAP Lu24 Homo sapiens cDNA clone IMAGE 3'
6076	18653	27046	3.28	1.0E-128	AB007923.1	NT	Homo sapiens mRNA for KIAA0454 protein, partial cds
6970	19553	27047	3.28	1.0E-128	AB007923.1	NT	Homo sapiens mRNA for KIAA0454 protein, partial cds
7834	17684	27920	1.25	1.0E-128	AA639108.1	EST_HUMAN	nc04611.1 NCI CGAP Ewt Homo sapiens cDNA clone IMAGE 1182620 similar to TR-G851338 G851338
8032	17683	28232	5.94	1.0E-128	11425254	NT	CHROMOSOME SEGREGATION GENE HOMOLOG CAS.1
8101	17991	28240	3.87	1.0E-128	AA929595.1	EST_HUMAN	Homo sapiens glutamate receptor, ionotropic, N-methyl D-aspartate 2D (GRIN2D) mRNA
8230	18111	28384	1.76	1.0E-128	BE384755.1	EST_HUMAN	ondb08.v1 NCI CGAP GC4 Homo sapiens cDNA clone IMAGE 1553383 (3') similar to gb-X54941 CYCLIN-DEPENDENT KINASES REGULATORY SUBUNIT 1 (HUMAN);
9293	19989	29182	3.98	1.0E-128	AF195230.1	EST_HUMAN	801277326F1 NH MGC 20 Homo sapiens cDNA clone IMAGE 391970 5'
116	10353	20182	2.19	1.0E-128	S37722.1	NT	EST1657690 IMAGE sequences, IMAGE Homo sapiens cDNA
407	10353	20182	1.35	1.0E-128	S37722.1	NT	Insulin-like growth factor binding protein-2 (human, placenta, Genomic, 1019 nt, segment 2 of 4)
1699	11597	21461	2.98	1.0E-128	AF059860.1	NT	Novel human mRNA containing zinc finger CCH2 type domains
1693	11595	21465	2.29	1.0E-128	AF240786.1	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds
1693	11595	21465	2.29	1.0E-128	AF240786.1	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds
1802	11699	21575	2.43	1.0E-128	11418522	NT	Homo sapiens zinc finger protein 76 (expressed in testis) (ZNF76) mRNA
2751	12613	22503	1.19	1.0E-128	4506662	NT	Homo sapiens pituitary-derived growth factor receptor, beta polypeptide (PDGFRB) mRNA
2751	12613	22504	1.19	1.0E-128	4506662	NT	Homo sapiens pituitary-derived growth factor receptor, beta polypeptide (PDGFRB) mRNA
3099	13016	22608	1.35	1.0E-128	Q114935	SWISSPROT	ZINC FINGER PROTEIN HZF10
3099	13016	22609	1.35	1.0E-128	Q114935	SWISSPROT	ZINC FINGER PROTEIN HZF10
3099	13016	22610	1.35	1.0E-128	Q114935	SWISSPROT	ZINC FINGER PROTEIN HZF10
4073	13575	23754	2.32	1.0E-128	AB040892.1	NT	Homo sapiens mRNA for KIAA1159 protein, partial cds
4193	14083	23866	9.7	1.0E-128	AW150254.1	EST_HUMAN	OMYAS Human cardiac muscle expression library Homo sapiens cDNA clone 4151835 similar to CMYAS5 Cardiomypathy associated gene 5
4193	14083	23867	9.7	1.0E-128	AW150254.1	EST_HUMAN	OMYAS Human cardiac muscle expression library Homo sapiens cDNA clone 4151835 similar to CMYAS5 Cardiomypathy associated gene 5

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Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5708	16814	25715	2.86	1.0E-126	AJ008945.1	NT	Homo sapiens KVLQT1 gene
6226	18095	20245	6.17	1.0E-126	AJ005344.1	NT	Homo sapiens KVLQT1 gene
6287	19132	29286	7.56	1.0E-126	11420850	NT	Homo sapiens similar to fibronectin protein S28 (H. sapiens) [LOC38394], mRNA
6841	19720	28968	3.86	1.0E-126	AB014634.1	EST	Homo sapiens mRNA for KIAA0634 protein, partial cds
6854	18424	28953	3.52	1.0E-126	AA828263.1	NT	af7207.r1 Soares. NIHMAPc, S1 Homo sapiens cDNA clone IMAGE:1047589 5'
6916	16132	29266	9.4	1.0E-126	11420850	NT	Homo sapiens similar to fibronectin protein S28 (H. sapiens) [LOC38394], mRNA
6888	18099	28953	2.04	1.0E-126	AU143115.1	EST_HUMAN	AU143115 Y79A41 Homo sapiens cDNA clone Y79A41001410 5'
6886	18099	28954	2.04	1.0E-126	AU143115.1	EST_HUMAN	AU143115 Y79A41 Homo sapiens cDNA clone Y79A41001410 5'
9250	18090		1.87	1.0E-126	H93165.1	EST_HUMAN	Y44605.r1 Soares fetal liver cDNA clone INFLS Homo sapiens cDNA clone IMAGE:109112 5' similar to
9630	19203		1.88	1.0E-126	AL207393.1	EST_HUMAN	SP-B49150 B49150 HP-25-HIBERNATION-RELATED PROTEIN - TAMIAS ASIATICUS=ASIAN ;
1843	11647	21408	6.81	1.0E-130	BE75192.1	EST_HUMAN	DKF2762K171.r1 782 (synonym: hmo2) Homo sapiens cDNA clone DKF2762K171 5'
1843	11647	21409	6.81	1.0E-130	BE75192.1	EST_HUMAN	601121095FT NIH_KGC_20 Homo sapiens cDNA clone IMAGE:3346359 5'
1940	11835		2.05	1.0E-130	Y04623.1	NT	Homo sapiens gene for cathepsin EC 1.11.18) seen 9 mapping to chromosome 11; band p13
2743	12605		2.71	1.0E-130	AJ010203.1	NT	Homo sapiens EST finger protein-like 1 antisense transcript, partial
2640	12777	22564	1.11	1.0E-130	BE564219.1	EST_HUMAN	601343016FT NIH_KGC_33 Homo sapiens cDNA clone IMAGE:3954468 5'
2640	12777	22565	1.11	1.0E-130	BE564219.1	EST_HUMAN	601343016FT NIH_KGC_33 Homo sapiens cDNA clone IMAGE:3954468 5'
3530	13449	23243	1.07	1.0E-130	AF240698.1	NT	Homo sapiens related dehydrogenase homolog, isoform-1 (RDH) mRNA, complete cds
3703	12777	22564	4.77	1.0E-130	BE564219.1	EST_HUMAN	601343016FT NIH_KGC_33 Homo sapiens cDNA clone IMAGE:3954468 5'
3703	12777	22565	4.77	1.0E-130	BE564219.1	EST_HUMAN	601343016FT NIH_KGC_33 Homo sapiens cDNA clone IMAGE:3954468 5'
3857	13788	23590	1.09	1.0E-130	AW 605590.1	EST_HUMAN	UHFH-BND-ahvq-90-001.r1 NIH_KGC_30 Homo sapiens cDNA clone IMAGE:3076731 5'
4358	14533	24122	7.48	1.0E-130	AW 619363.1	EST_HUMAN	CMF-ON045-180200-51.r1 602 ON045 Homo sapiens cDNA
5028	14602	24673	1.09	1.0E-130	AW363266.1	EST_HUMAN	RCS-CT0318-201169-031-r1 CT0318 Homo sapiens cDNA
5028	14602	24674	1.09	1.0E-130	AW363266.1	EST_HUMAN	RCS-CT0318-201169-031-r1 CT0318 Homo sapiens cDNA
6301	18165	28922	2.04	1.0E-130	11416777	NT	Homo sapiens adult carrier family 6 (neurotransmitter transporter, L-proline), member 7 (SLC6A7), mRNA
7119	16996	27187	2.45	1.0E-130	AW056242.1	EST_HUMAN	EST388312 IMAGE resequencing, MAGD Homo sapiens cDNA
7314	17150	27362	1.57	1.0E-130	AB037756.1	NT	Homo sapiens mRNA for KIAA1935 protein, partial cds
8513	18385	28950	32.43	1.0E-130	V25140.1	NT	Homo sapiens alpha-myosin heavy chain (MYH6) gene, exons 2, 3 and 4
4	9951	19782	2.49	0.0E+00	AA226125.1	EST_HUMAN	z15604.r1 Soares. NIHMAPc, S1 Homo sapiens cDNA clone IMAGE:397590 5' similar to TR-G222811
4	9951	19783	2.49	0.0E+00	AA226123.1	EST_HUMAN	z15604.r1 Soares. NIHMAPc, S1 Homo sapiens cDNA clone IMAGE:397590 5' similar to TR-G222811
7	5953	19786	1.44	0.0E+00	4885136	NT	G222811 ALPHA 1 CHAIN OF TYPE XII COLLAGEN ;

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Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
15	10001	19792	1.34	0.0E+00	8923348	NT	Homo sapiens hypothetical protein FLJ20371 (FLJ20371), mRNA
16	10001	19793	1.34	0.0E+00	8923348	NT	Homo sapiens hypothetical protein FLJ20371 (FLJ20371), mRNA
20	10007	19789	2.45	0.0E+00	D83327.1	NT	Homo sapiens DCRRT mRNA, partial cds
24	10011	19800	2.45	0.0E+00	D83327.1	NT	Homo sapiens DCRRT mRNA, partial cds
24	10011	19804	5.67	0.0E+00	AF141349.1	NT	Homo sapiens beta-tubulin mRNA, complete cds
33	10020	19816	0.97	0.0E+00	M5900.1	NT	Human heparin cofactor II (HCF2) gene, exons 1 through 5
35	10022	19819	2.41	0.0E+00	G957825	NT	Homo sapiens RNA-binding protein S1, serine-rich domain (RNPSP1), mRNA
51	10039	19845	1.4	0.0E+00	Y17151.2	NT	Homo sapiens mRNA for multidrug resistance protein 3 (ABCC3)
51	10039	19845	1.4	0.0E+00	Y17151.2	NT	Homo sapiens mRNA for multidrug resistance protein 3 (ABCC3)
52	10039	19847	1.22	0.0E+00	D78804.1	EST_HUMAN	HUM516-038 Human placenta polyA <sup>+</sup> (Fujikawa) Homo sapiens cDNA clone GEN-516H08.5
52	10039	19848	1.22	0.0E+00	D78804.1	EST_HUMAN	HUM516-038 Human placenta polyA <sup>+</sup> (Fujikawa) Homo sapiens cDNA clone GEN-516H08.5
53	10040	19849	4.14	0.0E+00	U15953.1	NT	Human ribosomal protein L7 (RPL7) mRNA, complete cds
55	10042	19852	8.1	0.0E+00	AV09634.1	EST_HUMAN	cr45607.x1, the bone marrow stroma Homo sapiens cDNA clone HBMSC.cr45607.3'
55	10042	19853	8.1	0.0E+00	AV09634.1	EST_HUMAN	cr45607.x1, the bone marrow stroma Homo sapiens cDNA clone HBMSC.cr45607.3'
60	10045	19857	5.8	0.0E+00	U03078.1	NT	Human von Willebrand factor pseudogene corresponding to exons 28 through 34
61	10047	19857	2.75	0.0E+00	U03078.1	NT	Human von Willebrand factor pseudogene corresponding to exons 28 through 34
60	10054	19869	1.77	0.0E+00	479877	NT	Homo sapiens protein tyrosine phosphatase, non-receptor type substrate 1 (PTPNS1) mRNA
60	10054	19870	1.77	0.0E+00	479877	NT	Homo sapiens protein tyrosine phosphatase, non-receptor type substrate 1 (PTPNS1) mRNA
71	10054	19869	1.49	0.0E+00	479877	NT	Homo sapiens protein tyrosine phosphatase, non-receptor type substrate 1 (PTPNS1) mRNA
71	10054	19870	1.49	0.0E+00	479877	NT	Homo sapiens protein tyrosine phosphatase, non-receptor type substrate 1 (PTPNS1) mRNA
74	10068	19876	42.13	0.0E+00	AA03770.1	EST_HUMAN	cr8904.x1 Scores: N1, T, GSC, S1 Homo sapiens cDNA clone IMAGE:195870.3' similar to SW-TM00, HUMAN P28269 TROPOMODULIN, ;
70	10000	19877	1.08	0.0E+00	4501600	NT	Homo sapiens antifolate binding protein 1 (entire oxidase (copper-containing)) (ABF1), nuclear gene encoding mitochondrial protein, mRNA
71	10061	19877	14.77	0.0E+00	4504444	NT	Homo sapiens heterogeneous nuclear ribonucleoprotein A1 (HNRP1) mRNA
80	10070	19886	47.55	0.0E+00	5018098	NT	Homo sapiens actin, beta (ACTB) mRNA
80	10073	19889	13.39	0.0E+00	U88277.1	EST_HUMAN	Human polyomavirus 1 homolog (HPV1) mRNA, partial cds
84	10079	19895	1.46	0.0E+00	AF141743.1	EST_HUMAN	HA1347 Human fetal liver cDNA library Homo sapiens cDNA
90	10080	19896	1.03	0.0E+00	AB03784.1	NT	Homo sapiens mRNA for KIAA1953 protein, partial cds
102	10086	19901	6.13	0.0E+00	X91213.1	NT	H. sapiens nci1 gene ( exon 2)
103	10086	19901	6.13	0.0E+00	X91213.1	NT	H. sapiens nci1 gene ( exon 2)
110	10091	19906	1.39	0.0E+00	AB23701.1	EST_HUMAN	ts33805.x1 NCI CGAP, U14 Homo sapiens cDNA clone IMAGE:220893.3' similar to TR-Q98551 Q98551
111	10091	19906	1.88	0.0E+00	AB23701.1	EST_HUMAN	ts33805.x1 NCI CGAP, U14 Homo sapiens cDNA clone IMAGE:220893.3' similar to TR-Q98551 Q98551

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## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
112	12656	19907	1.83	0.0E+00	N39040.1	EST_HUMAN	Y01408.11 Soares melanocyte 2bNH1 Homo sapiens cDNA clone IMAGE:270017 5'
112	12656	19908	1.83	0.0E+00	N39040.1	EST_HUMAN	Y01408.11 Soares melanocyte 2bNH1 Homo sapiens cDNA clone IMAGE:270017 5'
115	10394	19913	0.86	0.0E+00	4503459	NT	Homo sapiens nucleolin 2 (NRP2) mRNA
126	10100	19921	3.17	0.0E+00	4503638	NT	Homo sapiens polyomavirus (RNA) II (DNA directed) polypeptide A (220c) (POLR2A) mRNA
126	10100	19922	3.17	0.0E+00	4503638	NT	Homo sapiens polyomavirus (RNA) II (DNA directed) polypeptide A (220c) (POLR2A) mRNA
135	10108	19929	1.49	0.0E+00	T66946.1	EST_HUMAN	y839d4.2 Stratagene fetal spleen (#637205) Homo sapiens cDNA clone IMAGE:68310 5'
135	10108	19930	1.49	0.0E+00	T66946.1	EST_HUMAN	y839d4.2 Stratagene fetal spleen (#637205) Homo sapiens cDNA clone IMAGE:68310 5'
147	10121		9.05	0.0E+00	4504444	NT	Homo sapiens heteronucleolar ribonucleoprotein A1 (HNRP2) mRNA
151	10128	19943	2.42	0.0E+00	BF03881.1	EST_HUMAN	G01400378T NIH_MGC_265 Homo sapiens cDNA clone IMAGE:3503803 5'
153	10137		15.84	0.0E+00	4504444	NT	Homo sapiens heteronucleolar ribonucleoprotein A1 (HNRP2) mRNA
156	10130	19946	1.36	0.0E+00	AF111168.2	EST_HUMAN	G01174270F NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3529864 5'
156	10132	19947	1.1	0.0E+00	BE26973.1	EST_HUMAN	G01174270F NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3529864 5'
156	10132	19947	1.18	0.0E+00	BE26973.1	EST_HUMAN	G01174270F NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3529864 5'
160	10133	19948	2.96	0.0E+00	W13073.1	EST_HUMAN	y839d4.2 Stratagene fetal spleen (#637205) Homo sapiens cDNA clone IMAGE:68310 5'
161	10134	19949	1.51	0.0E+00	AF244089.1	NT	gb:U16283.2cds1 ZINC FINGER PROTEIN CLONE 647 (HUMAN);
164	10137	19952	18.37	0.0E+00	AL163202.2	NT	Homo sapiens zinc finger protein mRNA, complete cds
164	10137	19953	18.37	0.0E+00	AL163202.2	NT	Homo sapiens zinc finger protein mRNA, complete cds
174	10145	19960	4.25	0.0E+00	BE018970.1	EST_HUMAN	h32461.2,1 NIH_MGC_14 Homo sapiens cDNA clone IMAGE:2603854 5' similar to WP-Y97A10A.Z
174	10145	19961	4.25	0.0E+00	BE018970.1	EST_HUMAN	h32461.2,1 NIH_MGC_14 Homo sapiens cDNA clone IMAGE:2603854 5' similar to WP-Y97A10A.Z
179	10150	19964	1.98	0.0E+00	AB018327.1	NT	Homo sapiens mRNA for KIAA0784 protein, partial cds
179	10150	19965	1.98	0.0E+00	AB018327.1	NT	Homo sapiens mRNA for KIAA0784 protein, partial cds
187	10159	19976	130.42	0.0E+00	D50568.1	NT	Human gamma-oxalophosphate actin (ACTG18) pseudogene
192	10164	19981	2.83	0.0E+00	AF273045.1	NT	Homo sapiens CTCL tumor antigen sct4.3 mRNA, complete cds
192	10164	19982	2.83	0.0E+00	AF273045.1	NT	Homo sapiens CTCL tumor antigen sct4.3 mRNA, complete cds
192	10166	19984	2.92	0.0E+00	AF167174.1	NT	Homo sapiens chromosome X MS1.9-2 protein mRNA, complete cds
194	10166	19985	2.92	0.0E+00	AF167174.1	NT	Homo sapiens chromosome X MS1.9-2 protein mRNA, complete cds
203	12661	19991	9.33	0.0E+00	AB67308.1	EST_HUMAN	h32461.2,1 NIH_MGC_14 Homo sapiens cDNA clone IMAGE:2207947 3' similar to gb:U03191 PROFLIN 1 (HUMAN);
203	12661	19992	9.33	0.0E+00	AB67308.1	EST_HUMAN	h32461.2,1 NIH_MGC_14 Homo sapiens cDNA clone IMAGE:2207947 3' similar to gb:U03191 PROFLIN 1 (HUMAN);
205	10176	19994	1.94	0.0E+00	AF195656.1	NT	Homo sapiens DNA mismatch repair protein (MLH3) gene, complete cds

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
208	10170		16.69	0.0E+00	4506632	NT	Homo sapiens ribosomal protein L31 (RPL31) mRNA
209	10180		3.46	0.0E+00	AF132001.1	NT	Homo sapiens TADA1 protein mRNA, complete cds
215	10186	19569	2.48	0.0E+00	AB018264.1	NT	Homo sapiens mRNA for KIAA0721 protein, partial cds
216	10186	19569	1.95	0.0E+00	AB018264.1	NT	Homo sapiens mRNA for KIAA0721 protein, partial cds
217	10187	20000	1.81	0.0E+00	6678444	NT	Mus musculus testis-specific protein, 7'-untranslated (7'sp), mRNA
							TCBAP1E4469 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HQSG project=TCBA Homo sapiens
224	10195	20004	3.43	0.0E+00	BE246780.1	EST_HUMAN	cDNA clone TCBAP4469
							TCBAP1E4469 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HQSG project=TCBA Homo sapiens
224	10195	20005	3.43	0.0E+00	BE246780.1	EST_HUMAN	cDNA clone TCBAP4469
							TCBAP1E4469 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HQSG project=TCBA Homo sapiens
224	10195	20006	3.43	0.0E+00	BE246780.1	EST_HUMAN	cDNA clone TCBAP4469
							TCBAP1E4469 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HQSG project=TCBA Homo sapiens
225	10195	20004	3.99	0.0E+00	BE246780.1	EST_HUMAN	cDNA clone TCBAP4469
							TCBAP1E4469 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HQSG project=TCBA Homo sapiens
225	10195	20005	3.99	0.0E+00	BE246780.1	EST_HUMAN	cDNA clone TCBAP4469
							TCBAP1E4469 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HQSG project=TCBA Homo sapiens
225	10195	20006	3.99	0.0E+00	BE246780.1	EST_HUMAN	cDNA clone TCBAP4469
							TCBAP1E4469 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HQSG project=TCBA Homo sapiens
226	10195	20004	12.62	0.0E+00	BE246780.1	EST_HUMAN	cDNA clone TCBAP4469
							TCBAP1E4469 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HQSG project=TCBA Homo sapiens
226	10195	20005	12.62	0.0E+00	BE246780.1	EST_HUMAN	cDNA clone TCBAP4469
							TCBAP1E4469 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HQSG project=TCBA Homo sapiens
226	10195	20006	12.62	0.0E+00	BE246780.1	EST_HUMAN	cDNA clone TCBAP4469
							TCBAP1E4469 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HQSG project=TCBA Homo sapiens
238	10205	20023	4.66	0.0E+00	6463805	NT	Homo sapiens NS1-associated protein 1 (NSAP1) mRNA
240	10208		6.54	0.0E+00	AL163201.2	NT	Homo sapiens chromosome 21 segment HS211001
247	10213	20029	3.75	0.0E+00	AF121916.1	NT	Homo sapiens chromosome 21 unknown mRNA
249	10215	20032	1.46	0.0E+00	U68772.1	NT	H. sapiens mRNA for interferon alpha/beta receptor (long form)
257	10223		6.81	0.0E+00	AF121916.1	NT	Homo sapiens chromosome 21 unknown mRNA
269	10234	20050	1.14	0.0E+00	4507500	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1) mRNA
269	10234	20050	1.14	0.0E+00	4507500	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1) mRNA
270	10238	20033	2.57	0.0E+00	7709028	NT	Homo sapiens hypochelical protein (LOC51250), mRNA
281	10248	20036	1.11	0.0E+00	D83327.1	NT	Homo sapiens DORR1 mRNA, partial cds
281	10248	20037	1.11	0.0E+00	D83327.1	NT	Homo sapiens DORR1 mRNA, partial cds
282	10247		0.86	0.0E+00	U184533.1	EST_HUMAN	IL2-CT0031-181188-020-503 CT0031 Homo sapiens cDNA

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Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
290	10254	20074	5.26	0.0E+00	4507028	NT	Homo sapiens potassium inwardly-rectifying channel, subfamily J, member 15 (KCNJ15) mRNA
290	10254	20075	5.26	0.0E+00	4507028	NT	Homo sapiens potassium inwardly-rectifying channel, subfamily J, member 15 (KCNJ15) mRNA
301	10265	20085	-4.03	0.0E+00	AB028942.1	NT	Homo sapiens mRNA for KIAA1019 protein, partial cds
302	10266	20086	3.11	0.0E+00	AB028942.1	NT	Homo sapiens mRNA for KIAA1019 protein, partial cds
303	12684		5.3	0.0E+00	4506728	NT	Homo sapiens ribosomal protein S5 (RPS5) mRNA
304	10287	20087	1.69	0.0E+00	4503914	NT	Homo sapiens phosphotyrosylphosphatase, phosphotyrosylphosphatidyl synthetase, phosphotyrosylphosphatidyl synthetase (GART) mRNA
305	10269		2.03	0.0E+00	AA46002.1	EST_HUMAN	phosphotyrosylphosphatase (GART) mRNA
306	10269		13.26	0.0E+00	4507182	NT	Homo sapiens SON DNA binding protein (SON) mRNA
307	10269	20088	0.68	0.0E+00	4507182	NT	Homo sapiens SON DNA binding protein (SON) mRNA
311	10273	20092	2.23	0.0E+00	AF14498.1	NT	Homo sapiens intracellular shock protein (ISP) mRNA, complete cds
324	10285	20101	0.9	0.0E+00	U14867	SWISSPROT	TRANSCRIPTION REGULATOR PROTEIN BACH1 (B1B AND C1C HOMOLOG 1) (H42603)
324	10285	20102	0.61	0.0E+00	U14867	SWISSPROT	TRANSCRIPTION REGULATOR PROTEIN BACH1 (B1B AND C1C HOMOLOG 1) (H42603)
325	10286	20103	4.18	0.0E+00	7657213	NT	Homo sapiens homonally upregulated nest tumor-associated kinase (HUNK) mRNA
326	10286	20103	2.31	0.0E+00	7657213	NT	Homo sapiens homonally upregulated nest tumor-associated kinase (HUNK) mRNA
341	10300	20115	3.87	0.0E+00	5174574	NT	Homo sapiens myeloid/lymphoid or mixed-lineage leukemia (trithorax (Drosophila) homolog), translocated to, 4 (MLLT4) mRNA
342	10301	20116	0.86	0.0E+00	4505296	NT	Homo sapiens miosin (MSN) mRNA
343	10304	20120	3.76	0.0E+00	4827037	NT	Homo sapiens X-box binding protein 1 (XBP1) mRNA
348	10304	20120	0.8	0.0E+00	U71600.1	NT	Human zinc finger protein 2531 (ZNF251) mRNA, partial cds
353	10311	20129	2.15	0.0E+00	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
353	10311	20130	2.16	0.0E+00	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
354	12695	20131	3.4	0.0E+00	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
356	10313	20133	0.89	0.0E+00	4507500	NT	Homo sapiens 1-cell lymphoma invasion and metastasis 1 (TIMM1) mRNA
358	10315	20136	1.4	0.0E+00	4503854	NT	Homo sapiens GA-binding protein transcription factor, alpha subunit (GBTF1) (GALP1), mRNA
359	10316	20137	1.37	0.0E+00	D80006.1	NT	Homo sapiens GA-binding protein transcription factor, alpha subunit (GBTF1) (GALP1), mRNA
360	10316	20137	1.32	0.0E+00	D80006.1	NT	Homo sapiens GA-binding protein transcription factor, alpha subunit (GBTF1) (GALP1), mRNA
372	10326	20140	1.13	0.0E+00	AU134993.1	EST_HUMAN	Human mRNA for KIAA0184 gene, partial cds
381	10365	20186	5.35	0.0E+00	AB028942.1	NT	Human mRNA for KIAA0184 gene, partial cds
382	10365	20186	5.35	0.0E+00	AB028942.1	NT	Human mRNA for KIAA0184 gene, partial cds
382	10365	20189	1.01	0.0E+00	AI363014.1	EST_HUMAN	q81h05.x1 NCI, G627, Bm25 Homo sapiens cDNA clone IMAGE2016457.3 similar to glb-X54199
387	10334	20156	5.43	0.0E+00	AI0754180.1	EST_HUMAN	PC2-HORRORISOLYLAMINE-GLYCINE LIGASE (HUMAN)
390	10336	20156	1.38	0.0E+00	4503960	NT	Homo sapiens IgG Fc binding protein (FCG/GAMMA1B) mRNA
391	10337	20160	2.04	0.0E+00	4503960	NT	Homo sapiens IgG Fc binding protein (FCG/GAMMA1B) mRNA



Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit Database Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
361	10337	20161	2.04	0.0E+00	4509680	NT	Homo sapiens IgG Fc binding protein (FCGAMMA)BP mRNA
362	10338	20162	1.17	0.0E+00	4509680	NT	Homo sapiens IgG Fc binding protein (FCGAMMA)BP mRNA
363	10339	20163	1.64	0.0E+00	4509680	NT	Homo sapiens IgG Fc binding protein (FCGAMMA)BP mRNA
364	10340	20164	1.64	0.0E+00	4509680	NT	Homo sapiens IgG Fc binding protein (FCGAMMA)BP mRNA
365	10341	20165	2.43	0.0E+00	4509680	NT	Homo sapiens IgG Fc binding protein (FCGAMMA)BP mRNA
366	10342	20166	0.9	0.0E+00	4509680	NT	Homo sapiens IgG Fc binding protein (FCGAMMA)BP mRNA
367	10343	20167	0.84	0.0E+00	X74870.1	NT	H. sapiens gene for RNA, pol II largest subunit, exon 22-29
368	10344	20168	0.84	0.0E+00	X74870.1	NT	H. sapiens gene for RNA, pol II largest subunit, exon 22-29
400	10346		43.05	0.0E+00	4509608	NT	Homo sapiens ribosomal protein L18 (RPL18) mRNA
414	9681	19772	1.31	0.0E+00	R1766.1	EST_HUMAN	WQ5802.1 Soares Infant brain T1B8 Homo sapiens cDNA clone IMAGE:31682.6
421	10367		2.81	0.0E+00	4506728	NT	Homo sapiens ribosomal protein S5 (RPS5) mRNA
423	10368	20160	2.42	0.0E+00	AB028942.1	NT	Homo sapiens mRNA for KIAA1019 protein, partial cds
424	10369	20161	4.7	0.0E+00	4507132	NT	Homo sapiens SON DNA binding protein (SON) mRNA
425	10370	20162	4.7	0.0E+00	4507132	NT	Homo sapiens SON DNA binding protein (SON) mRNA
426	10371	20163	3.51	0.0E+00	AF13897.1	NT	Mus musculus truncated SON protein (SON), complete cds
438	10382	20066	2.01	0.0E+00	4507879	NT	Homo sapiens janus kinase receptor 1 (JNKG1) mRNA
443	10387		0.98	0.0E+00	AJ324322.1	EST_HUMAN	ES1270655 Coraballium II Homo sapiens cDNA, 5' end
444	10388		0.91	0.0E+00	BE23447.1	EST_HUMAN	60111520.F1 NH_MGC_16 Homo sapiens cDNA clone IMAGE:355248.6
460	10404	20220	3.15	0.0E+00	4504532	NT	Homo sapiens 5-hydroxytryptamine (serotonin) receptor 18 (HTR18) mRNA
461	10404	20221	3.15	0.0E+00	4504532	NT	Homo sapiens 5-hydroxytryptamine (serotonin) receptor 18 (HTR18) mRNA
465	10408	20226	1.27	0.0E+00	4507857	NT	Homo sapiens keratin 18 (KRT18) mRNA
466	10408	20229	1.27	0.0E+00	4507857	NT	Homo sapiens keratin 18 (KRT18) mRNA
475	10419	20255	2.26	0.0E+00	AL163246.2	NT	Homo sapiens chromosome 21 segment H521C046
476	10420	20256	7.05	0.0E+00	AL163246.2	NT	Homo sapiens chromosome 21 segment H521C046
477	10420	20257	7.05	0.0E+00	AL163246.2	NT	Homo sapiens chromosome 21 segment H521C046
478	10420	20257	7.05	0.0E+00	AL163246.2	NT	Homo sapiens chromosome 21 segment H521C046
485	10426	20242	2.59	0.0E+00	AB030303.1	NT	Homo sapiens mRNA for KIAA1209 protein, partial cds
487	10430	20244	1.84	0.0E+00	AU132868.1	EST_HUMAN	60123995 NT25P-4 Homo sapiens cDNA clone NT25P-4000837.6
489	10438	20250	2.17	0.0E+00	BE39144.1	EST_HUMAN	60127495.F1 NH_MGC_20 Homo sapiens cDNA clone IMAGE:3810756.6
489	10438	20251	1.05	0.0E+00	AW183925.1	EST_HUMAN	PMO-DT0065-130400-002-c06 DT0065 Homo sapiens cDNA
486	10440	20253	1.07	0.0E+00	AL117233.1	NT	Novel human gene mapping to chromosome 1
489	10441	20254	1.94	0.0E+00	89239535	NT	Homo sapiens PC326 protein (PC326), mRNA
508	10441	20263	3.91	0.0E+00	AL163210.2	NT	Homo sapiens chromosome 21 segment H521C010
515	12659	20267	1.97	0.0E+00	BE031527.1	EST_HUMAN	QV2-BT0635-160400-142-h08 BT0635 Homo sapiens cDNA
520	10462	20273	1.13	0.0E+00	BF028005.1	EST_HUMAN	60176466.F1 NH_MGC_53 Homo sapiens cDNA clone IMAGE:359595.6

Table 4

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Probe SEQ ID NO:	Exon NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
526	10468	20260	1.16	0.0E+00	AB040609.1	NT	Homo sapiens mRNA for KIA1470 protein, partial cds
528	10471	20263	11.27	0.0E+00	6006030	NT	Homo sapiens transcription elongation factor B (SII), polypeptide 1-like (CERIL) mRNA
530	10472	20264	3.96	0.0E+00	4504036	NT	Homo sapiens guanine nucleotide binding protein (G protein), alpha 11 (Gq class) (GNA11) mRNA
530	10472	20265	3.96	0.0E+00	4504036	NT	Homo sapiens guanine nucleotide binding protein (G protein), alpha 11 (Gq class) (GNA11) mRNA
536	10477		6.76	0.0E+00	AF003526.1	NT	Homo sapiens X-linked amblyopic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
544	10485	20266	1.79	0.0E+00	AW135324.1	EST_HUMAN	UHL-BH1-sub-H-04-UJ1 st NCI CGAP Sub3 Homo sapiens cDNA clone IMAGE-2713951.3'
554	10495		3.15	0.0E+00	D10363.1	NT	Homo sapiens RGH1 gene, retrovirus-like element
571	10510	20318	2.65	0.0E+00	5174742	NT	Homo sapiens ubiquinol-cytochrome c reductase, Rieske iron-sulfur polypeptide 1 (UQCRCF1), nuclear gene encoding mitochondrial protein, mRNA
584	10522		5.26	0.0E+00	U04096.1	NT	Human apolipoprotein A-I (ApoA-I) gene, exon 1
587	10526	20332	1.73	0.0E+00	BF04866.1	EST_HUMAN	50182527/NIH MSC_75 Homo sapiens cDNA clone IMAGE-045447.5'
593	10526	20336	1.46	0.0E+00	4601854	NT	Homo sapiens acyl-CoA oxidase A carboxylase beta (ACACB) mRNA
598	10534	20342	1.05	0.0E+00	AF221712.1	NT	Homo sapiens Smad3 and Olf-interacting zinc finger protein mRNA, partial cds
598	10534	20343	1.05	0.0E+00	AF221712.1	NT	Homo sapiens Smad3 and Olf-interacting zinc finger protein mRNA, partial cds
607	10543	20351	1.38	0.0E+00	AF140775.1	NT	Homo sapiens NOD1 protein (NOD1) gene, exons 1, 2, and 3
610	10548	20364	0.90	0.0E+00	6806918	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
611	10547	20355	2.22	0.0E+00	6806918	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
611	10547	20356	2.22	0.0E+00	6806918	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
612	10548	20357	0.93	0.0E+00	6806918	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
612	10548	20358	0.93	0.0E+00	6806918	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
619	10566	20368	1.34	0.0E+00	AA359486.1	EST_HUMAN	z86037.1 Scores: testis, NHT Homo sapiens cDNA clone IMAGE726732.5'
623	10560	20372	6.37	0.0E+00	D11078.1	NT	Homo sapiens RGH2 gene, retrovirus-like element
627	10564	20375	3.17	0.0E+00	W78811.1	EST_HUMAN	z81804.1 Scores: fetal_liver, spleen, INFLS_S1 Homo sapiens cDNA clone IMAGE-415567.5' similar to g8-A21187 ALPHA-2-MACROGLOBULIN PRECURSOR (HUMAN);
627	10564	20376	3.17	0.0E+00	W78811.1	EST_HUMAN	z81804.1 Scores: fetal_liver, spleen, INFLS_S1 Homo sapiens cDNA clone IMAGE-415567.5' similar to g8-A21187 ALPHA-2-MACROGLOBULIN PRECURSOR (HUMAN);
630	10574	20386	3.28	0.0E+00	4885526	NT	Homo sapiens novel SH2 containing protein 2 (NSP3) mRNA
630	10574	20389	1.89	0.0E+00	6006003	NT	Homo sapiens glutamate receptor, ionotropic, N-methyl D-aspartate 2B (GRIN2B) mRNA
642	10579	20396	2.09	0.0E+00	5931624	NT	Homo sapiens CCAAT-box-binding transcription factor (CBF2) mRNA
646	10583	20398	1.41	0.0E+00	U06235.1	NT	Human neutral amino acid transporter (ASCT1) gene, exon 8
646	10583	20399	2.18	0.0E+00	AF106380.1	NT	Homo sapiens sodium/calcium exchanger isoform Nca3 (NCX1) mRNA, complete cds
646	10583	20399	2.18	0.0E+00	AF106380.1	NT	Homo sapiens sodium/calcium exchanger isoform Nca3 (NCX1) mRNA, complete cds
652	10589	20404	3.08	0.0E+00	4835947	NT	Homo sapiens protein kinase, X-linked (PRKX) mRNA

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
652	10588	20405	3.98	0.0E+00	4828947	NT	Homo sapiens protein kinase, X-linked (PRCK) mRNA
658	12672		4.55	0.0E+00	X57147.1	NT	Human endogenous reovirus p1E-1 (ERV9)
687	10801	20419	4.59	0.0E+00	4504424	NT	Homo sapiens high-mobility group (nonhistone chromosomal) protein 1 (HMG1) mRNA
672	10966	20423	4.35	0.0E+00	AB029012.1	NT	Homo sapiens mRNA for KIAA1088 protein, partial cds
682	10615	20438	2.03	0.0E+00	7657468	NT	Homo sapiens similar to rat integral membrane glycoprotein POMT21 (POMT21L1), mRNA
692	10625	20450	19.46	0.0E+00	AA014837.1	EST_HUMAN	np40401.s1 NC_CGAP_BF.1 Homo sapiens cDNA clone IMAGE:122633 3' similar to gbX57352
690	10629	20454	7.65	0.0E+00	MG0575.1	NT	INTERFERON-INDUCIBLE PROTEIN 1-8U (HUMAN);
690	10629	20455	7.65	0.0E+00	MG0575.1	NT	Human von Willebrand factor gene, exons 23 through 34
705	10639	20464	1.45	0.0E+00	9032102	NT	Homo sapiens TNF receptor-associated factor 1 (TRAF1) mRNA
712	10644	20470	3.85	0.0E+00	AF284750.1	NT	Homo sapiens ALR-like protein mRNA, partial cds
712	10644	20471	3.85	0.0E+00	AF284750.1	NT	Homo sapiens ALR-like protein mRNA, partial cds
714	10646	20474	9.78	0.0E+00	11549800	NT	Homo sapiens hypochondrial protein FLJ21834 (FLJ21834), mRNA
718	10651	20481	1.7	0.0E+00	BE241577.1	EST_HUMAN	TCAAP1D0779 Pediatric acute myelogenous leukemia cell (FAB M1) Bayler-HGSC project-TCAA Homo sapiens cDNA clone TCAP0779
738	10870	20505	1.12	0.0E+00	AF228902.2	NT	Homo sapiens BHC class I antigen (HLA-G) mRNA, HLX-G1 allele, complete cds
738	10870	20509	1.12	0.0E+00	AF228902.2	NT	Homo sapiens BHC class I antigen (HLA-G) mRNA, HLX-G1 allele, complete cds
740	10871	20507	2.4	0.0E+00	AF170492.1	NT	Homo sapiens chloride channel CLCA (CLCA) mRNA, complete cds
743	10874	20510	1.35	0.0E+00	U03764.1	NT	Human, plasminogen activator inhibitor-1 gene, exons 2 to 9
743	10874	20511	1.35	0.0E+00	U03764.1	NT	Human, plasminogen activator inhibitor-1 gene, exons 2 to 9
748	10876	20512	0.78	0.0E+00	AB037760.1	NT	Homo sapiens zinc finger protein 212 (ZNF212), mRNA
747	10877	20513	1.12	0.0E+00	D50612.1	EST	Homo sapiens mRNA for repressor protein, partial cds
747	10878	20514	0.81	0.0E+00	BE06735.1	EST_HUMAN	60144564.F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3949003 5'
748	10878	20515	2.17	0.0E+00	BE06735.1	EST_HUMAN	60144564.F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3949003 5'
752	10882	20519	3.38	0.0E+00	R48915.1	EST_HUMAN	Y89068.r1 Soares breast 2NB-Hist Homo sapiens cDNA clone IMAGE:154046 5'
753	10883	20520	2.4	0.0E+00	5032028	NT	Homo sapiens splicing factor 3a, subunit 1, 1200 (SF3A1), mRNA
753	10883	20520	2.4	0.0E+00	AB011399.1	NT	Homo sapiens gene for AF-6, complete cds
762	10892	20529	1.58	0.0E+00	AB011399.1	NT	Homo sapiens KIAA0170 gene product (KIAA0170), mRNA
765	10896	20533	2.97	0.0E+00	7661965	NT	Homo sapiens KIAA0170 gene product (KIAA0170), mRNA
775	10705	20544	1.17	0.0E+00	D30006.1	NT	Human mRNA for KIAA0184 gene, partial cds
775	10705	20545	1.17	0.0E+00	D30006.1	NT	Human mRNA for KIAA0184 gene, partial cds
780	10710	20549	2.64	0.0E+00	X581772.1	NT	H.sapiens mRNA for KIAA0910 protein (long form)
784	10714	20553	2.37	0.0E+00	AB020717.1	NT	Homo sapiens mRNA for KIAA0910 protein, partial cds
784	10714	20554	2.37	0.0E+00	AB020717.1	NT	Homo sapiens mRNA for KIAA0910 protein, partial cds
788	10718	20560	6.84	0.0E+00	5174478	NT	Homo sapiens perlecanin (PCNT) mRNA

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top Hit) E-VALUE	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
790	10719		7.05	0.0E+00	4507500	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1) mRNA
807	10736	20561	1.51	0.0E+00	7657213	NT	Homo sapiens homonally upregulated nest tumor-associated kinase (HUNK) mRNA
808	10737	20562	4.45	0.0E+00	7657213	NT	Homo sapiens homonally upregulated nest tumor-associated kinase (HUNK) mRNA
810	10739	20564	3.91	0.0E+00	4507698	NT	Homo sapiens potassium voltage-gated channel, Isk-related family, member 1 (KCNE1) mRNA
816	10744	20560	1.24	0.0E+00	AF108330.1	NT	Homo sapiens serine-threonine protein kinase (MNISH) mRNA, complete cds
818	10744	20561	1.24	0.0E+00	AF108330.1	NT	Homo sapiens serine-threonine protein kinase (MNISH) mRNA, complete cds
821	10746	20568	1.14	0.0E+00	4503854	NT	Homo sapiens GA-binding protein transcription factor, alpha subunit (GABPA) mRNA
823	10752	20601	1.85	0.0E+00	4507500	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1) mRNA
825	10752	20602	1.85	0.0E+00	4507500	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1) mRNA
832	10759		1.37	0.0E+00	AF02743.1	NT	Homo sapiens sodium/iodide cotransporter (SLC5A3) gene, complete cds
836	10763	20673	3.37	0.0E+00	AB028942.1	NT	Homo sapiens mRNA for KIAA1019 protein, partial cds
836	10763	20674	3.37	0.0E+00	AB028942.1	NT	Homo sapiens mRNA for KIAA1019 protein, partial cds
837	10764	20675	7.38	0.0E+00	4507152	NT	Homo sapiens SON DNA binding protein (SON) mRNA
838	10765	20676	3.03	0.0E+00	AB028942.1	NT	Homo sapiens mRNA for KIAA1019 protein, partial cds
839	10768	20677	2.02	0.0E+00	4506728	NT	Homo sapiens mRNA for KIAA1019 protein, partial cds
843	10770	20620	1.25	0.0E+00	AB020717.1	NT	Homo sapiens mRNA for KIAA1019 protein, partial cds
844	10771	20621	1.25	0.0E+00	AA533272.1	EST_HUMAN	Homo sapiens mRNA for KIAA1019 protein, partial cds
844	10771	20622	1.97	0.0E+00	AA533272.1	EST_HUMAN	Homo sapiens mRNA for KIAA1019 protein, partial cds
845	10771	20623	1.97	0.0E+00	BF677994.1	EST_HUMAN	Homo sapiens mRNA for KIAA1019 protein, partial cds
845	10772		7.30	0.0E+00	BF677994.1	EST_HUMAN	Homo sapiens mRNA for KIAA1019 protein, partial cds
849	10776	20624	1.3	0.0E+00	7657213	NT	Homo sapiens mRNA for KIAA1019 protein, partial cds
849	10776	20625	1.3	0.0E+00	7657213	NT	Homo sapiens mRNA for KIAA1019 protein, partial cds
850	10777	20626	2.16	0.0E+00	7657213	NT	Homo sapiens mRNA for KIAA1019 protein, partial cds
850	10777	20627	2.16	0.0E+00	7657213	NT	Homo sapiens mRNA for KIAA1019 protein, partial cds
873	10789	20650	0.87	0.0E+00	AL163203.2	EST	Homo sapiens chromosome 21 segment HS21C003
880	10808	20656	1.85	0.0E+00	BE069592.1	EST_HUMAN	QV0-B10703-290400-211-g11 B10703 Homo sapiens cDNA
880	10808	20656	1.85	0.0E+00	BE069592.1	EST_HUMAN	QV0-B10703-290400-211-g11 B10703 Homo sapiens cDNA
890	10816	20660	3.93	0.0E+00	AL163203.2	NT	Homo sapiens chromosome 21 segment HS21C003
900	10825		7.45	0.0E+00	4504958	NT	Homo sapiens laminin receptor 1 (LR1), ribosomal protein SA (LAMR1) mRNA
903	10825		3.20	0.0E+00	4504958	NT	Homo sapiens laminin receptor 1 (LR1), ribosomal protein SA (LAMR1) mRNA
904	10828	20673	1.51	0.0E+00	AF165747.1	NT	Homo sapiens alpha 1 antitrypsin protein precursor, mRNA, partial cds
905	10829	20674	0.99	0.0E+00	AF165747.1	NT	protein C inhibitor (human, leukocytes, Genbank: 1218 nt, segment 2 of 5)
905	10829	20675	0.99	0.0E+00	566364.1	NT	protein C inhibitor (human, leukocytes, Genbank: 1218 nt, segment 2 of 5)
905	10829	20676	0.99	0.0E+00	566364.1	NT	protein C inhibitor (human, leukocytes, Genbank: 1218 nt, segment 2 of 5)

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Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
908	10830	20877	2.14	0.0E+00	Z8101.1	NT	Homo sapiens kallistatin (P4) gene, exons 1-4, complete cds
909	10833	20880	105.13	0.0E+00	Z20695.1	NT	Homo sapiens of cardiac alpha-myosin heavy chain gene
909	10833	20881	105.13	0.0E+00	Z20695.1	NT	Homo sapiens of cardiac alpha-myosin heavy chain gene
910	10834	20882	187.84	0.0E+00	Z20695.1	NT	Homo sapiens of cardiac alpha-myosin heavy chain gene
910	10834	20883	187.84	0.0E+00	Z20695.1	NT	Homo sapiens of cardiac alpha-myosin heavy chain gene
935	10860	20706	36.3	0.0E+00	M37160.1	NT	Human ras inhibitor mRNA, 3' end
935	10860	20706	36.3	0.0E+00	M37160.1	NT	Human ras inhibitor mRNA, 3' end
936	10861	20707	13.25	0.0E+00	M37160.1	NT	Human ras inhibitor mRNA, 3' end
937	10862	20708	53.71	0.0E+00	M37160.1	NT	Human ras inhibitor mRNA, 3' end
938	10863	20709	1.9	0.0E+00	4507430.1	NT	Homo sapiens thymocyte embryonic factor (TEF) mRNA
938	10863	20710	1.9	0.0E+00	4507430.1	NT	Homo sapiens thymocyte embryonic factor (TEF) mRNA
946	12681	20717	2.46	0.0E+00	A001948.1	EST_HUMAN	os98803 at NCI_OGAP_GG3 Homo sapiens cDNA clone IMAGE:1613404 3'
946	12681	20718	2.46	0.0E+00	A001948.1	EST_HUMAN	os98803 at NCI_OGAP_GG3 Homo sapiens cDNA clone IMAGE:1613404 3'
948	10872	20720	7.21	0.0E+00	7637268.1	NT	Homo sapiens KIAA0929 protein Mx2 interacting nuclear target (MINT) homolog (K1A-0929), mRNA
949	10882	20720	2.52	0.0E+00	AB03586.1	NT	Homo sapiens mRNA for S924, complete cds
957	10890	20736	4.84	0.0E+00	BF956074.1	EST_HUMAN	FN2-GN0074-350600-001-402 GN0074 Homo sapiens cDNA
957	10890	20737	4.84	0.0E+00	BF956074.1	EST_HUMAN	FN2-GN0074-350600-001-402 GN0074 Homo sapiens cDNA
957	10890	20738	4.84	0.0E+00	BF956074.1	EST_HUMAN	FN2-GN0074-350600-001-402 GN0074 Homo sapiens cDNA
958	10891	20739	1.27	0.0E+00	X52207.1	NT	Homo sapiens partial c-fgr gene, exons 2 and 3
958	10891	20740	1.27	0.0E+00	X52207.1	NT	Homo sapiens partial c-fgr gene, exons 2 and 3
977	10900	20747	1.25	0.0E+00	4757509.1	NT	Homo sapiens chromodomain protein, Y chromosome-like (CDYL) mRNA
977	10900	20747	1.25	0.0E+00	4757509.1	NT	Homo sapiens chromodomain protein, Y chromosome-like (CDYL) mRNA
988	10910	20755	1.05	0.0E+00	U83698.1	NT	Homo sapiens tubulin (TUB4) gene, complete cds
988	10910	20755	1.05	0.0E+00	U83698.1	NT	Homo sapiens tubulin (TUB4) gene, complete cds
989	10911	20756	7.48	0.0E+00	U83698.1	NT	Homo sapiens tubulin (TUB4) gene, complete cds
990	10911	20756	6.89	0.0E+00	U83698.1	NT	Homo sapiens tubulin (TUB4) gene, complete cds
993	10914		1.86	0.0E+00	AF108460.1	NT	Homo sapiens Bg22.1 region and MTG8 (CEFA217) gene, partial cds
994	10914		3.46	0.0E+00	AF108460.1	NT	Homo sapiens Bg22.1 region and MTG8 (CEFA217) gene, partial cds
997	10917	20761	0.84	0.0E+00	AF11170.3	NT	Homo sapiens 1432 Jagged2 gene, complete cds, and unknown gene
998	10917	20761	1.43	0.0E+00	AF11170.3	NT	Homo sapiens 1432 Jagged2 gene, complete cds, and unknown gene
999	10917	20761	1.31	0.0E+00	AF11170.3	NT	Homo sapiens 1432 Jagged2 gene, complete cds, and unknown gene
1000	10918	20762	2.23	0.0E+00	AF11170.3	NT	Homo sapiens 1432 Jagged2 gene, complete cds, and unknown gene
1003	10921	20765	2.28	0.0E+00	7581685.1	NT	Homo sapiens DKFP958A0122 protein (DKFP958A0122), mRNA
1007	10925	20769	2.66	0.0E+00	5903114.1	NT	Homo sapiens inner membrane protein, mitochondrial (IMAT), mRNA
1009	10927		1.94	0.0E+00	A4456880.1	EST_HUMAN	ss9907.c1 Sitabone (ss9907) Homo sapiens cDNA clone IMAGE:688226 3' similar to SWI-PR58_HUMAN P47210 28S PROTEASE REGULATORY SUBUNIT 8,

Table 4  
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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1012	10830	20774	1.04	0.0E+00	N43182.1	EST_HUMAN	EST15124 WATM1 Homo sapiens cDNA clone 5124 similar to DNA-DIRECTED RNA POLYMERASE II (alignment Ser and Pro with BLASTx or p)
1012	10830	20775	1.04	0.0E+00	N43182.1	EST_HUMAN	EST15124 WATM1 Homo sapiens cDNA clone 5124 similar to DNA-DIRECTED RNA POLYMERASE II (alignment Ser and Pro with BLASTx or p)
1013	10831	20776	0.97	0.0E+00	4759249	NT	Homo sapiens TRAF family member-associated NFKB activator (TANK) mRNA
1013	10831	20777	0.97	0.0E+00	4759249	NT	Homo sapiens TRAF family member-associated NFKB activator (TANK) mRNA
1017	10835	20777	4.44	0.0E+00	8922033	NT	Homo sapiens hypothetical protein FLJ11116 (FLJ11169) mRNA
1031	10849	20792	2.19	0.0E+00	4759509	NT	Homo sapiens heat shock 70kD protein 98 (mortalin-2) (HSPA98) mRNA
1049	10869	20807	1.85	0.0E+00	4826072	NT	Homo sapiens cadherin 6, K-cadherin (fetal kidney) (CDH6) mRNA
1049	10869	20808	1.85	0.0E+00	4826072	NT	Homo sapiens cadherin 6, K-cadherin (fetal kidney) (CDH6) mRNA
1053	10870	20812	2.52	0.0E+00	8922624	NT	Homo sapiens hypothetical protein FLJ20565 (FLJ20565) mRNA
1053	10870	20813	2.52	0.0E+00	8922624	NT	Homo sapiens hypothetical protein FLJ20565 (FLJ20565) mRNA
1054	10871	20814	38.24	0.0E+00	4124522.1	NT	Homo sapiens mRNA for alpha-tubulin 8 (TUBA8 gene)
1055	10873	20819	0.93	0.0E+00	8922927	NT	Homo sapiens hypothetical protein FLJ20490 (FLJ20490) mRNA
1055	10873	20819	0.93	0.0E+00	8922927	NT	Homo sapiens hypothetical protein FLJ20490 (FLJ20490) mRNA
1058	10876	20819	3.28	0.0E+00	4174354	NT	Homo sapiens ubiquitin modifier, at8 homolog (UBH) mRNA
1060	10882	20827	3.69	0.0E+00	4758117	NT	Homo sapiens DnaK associated protein 3 (DnaK3) mRNA
1060	10882	20827	3.69	0.0E+00	4758117	NT	Homo sapiens DnaK associated protein 3 (DnaK3) mRNA
1063	10119	20861	3.78	0.0E+00	7706134	NT	MRG-BN0115-200300.008-108 BN0115 Homo sapiens cDNA
1103	11019	20862	3.78	0.0E+00	7706134	NT	Homo sapiens potassium channel, subfamily K, member 9 (KCNG9) mRNA
1116	11031	20872	1.12	0.0E+00	4826947	NT	Homo sapiens potassium channel, subfamily K, member 9 (KCNG9) mRNA
1116	11031	20873	1.12	0.0E+00	4826947	NT	Homo sapiens potassium channel, subfamily K, member 9 (KCNG9) mRNA
1117	11032	20874	5.7	0.0E+00	4505712	NT	Homo sapiens ribosomal protein S27a (RPS27A) mRNA
1119	11034	20878	0.86	0.0E+00	8922390	NT	Homo sapiens hypothetical protein FLJ20569 (FLJ20569) mRNA
1121	11035	20878	10.18	0.0E+00	AB020059.1	NT	Homo sapiens DNA for Human P2M, complete cds
1123	11038	20879	12.02	0.0E+00	AB020059.1	NT	Homo sapiens DNA for Human P2M, complete cds
1124	11039	20880	2.03	0.0E+00	7657498	NT	Homo sapiens similar to rat integral membrane glycoprotein POM121 (POM121L1) mRNA
1124	11039	20881	2.03	0.0E+00	7657498	NT	Homo sapiens similar to rat integral membrane glycoprotein POM121 (POM121L1) mRNA
1128	11042	20884	0.95	0.0E+00	7706500	NT	Homo sapiens Npw68-binding protein Npw68 (LOC51729) mRNA
1129	11043	20885	1.44	0.0E+00	AH47850.1	EST_HUMAN	q622410.x1 Soave, pregnant, uterus. NbljPU Homo sapiens cDNA clone IMAGE1697011.3
1131	11045	20887	1.44	0.0E+00	AB020710.1	NT	Homo sapiens mRNA for KIAA0003 protein, partial cds
1140	11049	20890	1.13	0.0E+00	9605844	NT	Homo sapiens chromosome 12 open reading frame 3 (C12ORF3), mRNA
1152	11056	20908	2.31	0.0E+00	7305076	NT	Homo sapiens glutamate decarboxylase 1 (brain, 67kD) (GAD1), transcript variant GAD26, mRNA
1152	11056	20909	2.31	0.0E+00	7305076	NT	Homo sapiens glutamate decarboxylase 1 (brain, 67kD) (GAD1), transcript variant GAD26, mRNA
1154	11067	20911	1.59	0.0E+00	AB0307835.1	NT	Homo sapiens mRNA for KIAA1114 protein, partial cds

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) HI BLAST E Value	Top HI Accession No.	Top HI Database Source	Top HI Descriptor
1161	11074	20920	1.02	0.0E+00	4557887	NT	Homo sapiens keratin 18 (KRT18) mRNA
1169	11101		1.13	0.0E+00	7697336	NT	Homo sapiens mut. (E. coli) homolog 3 (MLH3) mRNA
1209	11116	20962	1.14	0.0E+00	AF284750.1	NT	Homo sapiens ALR-like protein mRNA, partial cds
1206	11116	20963	1.14	0.0E+00	AF284750.1	NT	Homo sapiens ALR-like protein mRNA, partial cds
1207	11117	20964	1.31	0.0E+00	AF284750.1	NT	Homo sapiens ALR-like protein mRNA, partial cds
1208	12887	20965	0.95	0.0E+00	AF284750.1	NT	Homo sapiens ALR-like protein mRNA, partial cds
1226	11334	20989	3.62	0.0E+00	AF109718.1	NT	Homo sapiens chromosome 3 subtelomeric region
1227	11335	20989	1.48	0.0E+00	AF109718.1	NT	Homo sapiens chromosome 3 subtelomeric region
1245	11352		1.48	0.0E+00	4503038	NT	Homo sapiens chondroitin sulfate proteoglycan 1 (melanoma-associated) (CSPG4), mRNA
1263	11667	21002	48.69	0.0E+00	Y18000.1	NT	Homo sapiens NF2 gene
1260	11670	21018	3.66	0.0E+00	AF94479.1	NT	Homo sapiens ribosomal protein S2 (RPS2) mRNA
1261	11673	21023	1.71	0.0E+00	AF94479.1	NT	Homo sapiens Williams-Buren syndrome decision transcript 9 (WBSDB9) mRNA, complete cds
1268	11723	21023	1.71	0.0E+00	AB040940.1	NT	Homo sapiens mRNA for KIAA1507 protein, partial cds
1278	11768	21035	8.42	0.0E+00	AB040940.1	NT	Homo sapiens mRNA for KIAA1507 protein, partial cds
1278	11768	21037	8.42	0.0E+00	5174748	NT	Homo sapiens Wallgren syndrome (WFS) mRNA
1278	11768	21037	8.42	0.0E+00	5174748	NT	Homo sapiens Wallgren syndrome (WFS) mRNA
1278	11768	21038	8.42	0.0E+00	5174748	NT	Homo sapiens Wallgren syndrome (WFS) mRNA
1279	11767		2.0	0.0E+00	AF569156.1	NT	Homo sapiens ribonuclease ZN BR gamma subunit gene, exon 5
1289	12689	21050	1.1	0.0E+00	767529	NT	Homo sapiens ribonuclease ZN BR gamma subunit gene, exon 5
1289	12689	21051	1.1	0.0E+00	767529	NT	Homo sapiens ribonuclease ZN BR gamma subunit gene, exon 5
1295	11202	21057	1.71	0.0E+00	5803146	NT	Homo sapiens zinc finger protein 9 (ZNF9), mRNA
1296	11203	21059	0.82	0.0E+00	4508004	NT	Homo sapiens zinc finger protein 9 (ZNF9), mRNA
1298	11205	21059	1.07	0.0E+00	5803146	NT	Homo sapiens zinc finger protein 9 (ZNF9), mRNA
1300	11207	21061	4.1	0.0E+00	AB011148.1	NT	Homo sapiens zinc finger protein 9 (ZNF9), mRNA
1301	11208	21062	1.09	0.0E+00	7681825	NT	Homo sapiens KIAA0770 gene product (KIAA0770), mRNA
1302	11209	21063	4.84	0.0E+00	7681825	NT	Homo sapiens KIAA0770 gene product (KIAA0770), mRNA
1303	11210	21064	4.1	0.0E+00	8507397	NT	Homo sapiens KIAA0770 gene product (KIAA0770), mRNA
1303	11210	21065	4.1	0.0E+00	8507397	NT	Homo sapiens KIAA0770 gene product (KIAA0770), mRNA
1315	11221	21078	1.35	0.0E+00	U14123.1	NT	Human endogenous retrovirus HERV-K10
1383	11291	21147	0.89	0.0E+00	AJ25014.1	NT	Human endogenous retrovirus HERV-K10
1393	11296	21150	9.13	0.0E+00	AJ278802.1	NT	Human endogenous retrovirus HERV-K10
1395	11301	21160	0.96	0.0E+00	AI208756.1	EST HUMAN	Homo sapiens partial 17N gene for lin
1397	11302	21161	6.18	0.0E+00	6042236	NT	Homo sapiens cDNA clone IMAGE:183427 3' similar to WIP-T2A1.5 CE:14213
1397	11302	21161	6.18	0.0E+00	6042236	NT	RAN, member RAS oncogene family/Homo sapiens RAN, member RAS oncogene family (RAN), mRNA

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) HR BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1407	11312	21173	1.4	0.0E+00	4505646	NT	Homo sapiens proprotein convertase subtilisin/kexin type 2 (PCSK2) mRNA
1407	11312	21174	1.4	0.0E+00	4505646	NT	Homo sapiens proprotein convertase subtilisin/kexin type 2 (PCSK2) mRNA
1409	11314	21177	2.54	0.0E+00	7705665	NT	Homo sapiens KIAA1114 protein (KIAA1114), mRNA
1409	11314	21178	2.54	0.0E+00	7705665	NT	Homo sapiens KIAA1114 protein (KIAA1114), mRNA
1412	11317	21180	5.25	0.0E+00	AJ338093.1	NT	Homo sapiens partial AF-4 gene, exons 2 to 7 and Alu repeat elements
1421	11327	21192	3.51	0.0E+00	AF033260.1	NT	Homo sapiens alpha1-silicoyltransferase (epiH1-Sfuc1) gene, exon 7
1432	11337	21203	9.7	0.0E+00	4507720	NT	Homo sapiens titin (TTN) mRNA
1432	11337	21204	9.7	0.0E+00	4507720	NT	Homo sapiens titin (TTN) mRNA
1437	11342	21208	1.02	0.0E+00	U35637.1	NT	Human nebulin mRNA, partial cds
1437	11342	21209	1.02	0.0E+00	U35637.1	NT	Human nebulin mRNA, partial cds
1448	11350	21214	3.06	0.0E+00	AL137664.1	NT	Novel human gene on chromosome 20
1447	11352	21215	1.03	0.0E+00	D50771.1	NT	Novel human gene mapping to chromosome 1
1451	11355	21223	1.22	0.0E+00	D50771.1	NT	Novel human gene mapping to chromosome 1
1454	11358	21223	4.97	0.0E+00	B912457	NT	Homo sapiens calcitriol binding protein 1 (KIA0330), mRNA
1458	11361	21223	1.51	0.0E+00	7681965	NT	Homo sapiens KIAA0170 gene product (KIAA0170), mRNA
1458	11361	21226	1.51	0.0E+00	7681965	NT	Homo sapiens KIAA0170 gene product (KIAA0170), mRNA
1457	11362	21227	0.97	0.0E+00	U07429.2	NT	Homo sapiens RFB26 gene for RING finger protein
1462	11367	21231	3.65	0.0E+00	U06076.1	NT	Human von Willebrand factor pseudogene corresponding to exons 23 through 34
1462	11367	21232	3.65	0.0E+00	U06076.1	NT	Human von Willebrand factor pseudogene corresponding to exons 23 through 34
1465	11368	21256	1.32	0.0E+00	7709434	NT	Homo sapiens IHDG for homolog of Drosophila headcase (LOC91599), mRNA
1509	11414	21273	0.96	0.0E+00	AA481172.1	EST_HUMAN	CG146337.1 NCI CGAP, CG81 Homo sapiens cDNA clone IMAGE31616 5'
1516	11420	21276	11.95	0.0E+00	AF023960.1	NT	Ceroid lipofuscinosis cytoplasmic A mRNA, complete cds
1516	11420	21277	11.96	0.0E+00	AF023960.1	NT	Ceroid lipofuscinosis cytoplasmic A mRNA, complete cds
1517	11422	21280	0.97	0.0E+00	D10864.1	NT	Bovine mRNA for neurocaldesmon
1519	11424	21283	2.03	0.0E+00	U76027.1	NT	Homo sapiens Bruton's tyrosine kinase (BTK), alpha-D-galactosidase A (GLA), L4-like ribosomal protein (L4L) and FTPS (FTPS) genes, complete cds
1520	11426	21283	3.9	0.0E+00	4505404	NT	Homo sapiens transmembrane glycoprotein (GPNMB) mRNA
1520	11426	21284	3.9	0.0E+00	4505404	NT	Homo sapiens transmembrane glycoprotein (GPNMB) mRNA
1521	11428	21285	3.12	0.0E+00	7692405	NT	Homo sapiens KIAA0557 protein (KIAA0557), mRNA
1522	11427	21285	8.41	0.0E+00	7692405	NT	Homo sapiens TNF-inducible protein CG12-1 (CG12-1), mRNA
1527	11432	21289	6.02	0.0E+00	AB6478.1	NT	Human transglutaminase mRNA, complete cds
1530	11435	21291	5.76	0.0E+00	4507720	NT	Homo sapiens titin (TTN) mRNA
1530	11435	21292	5.76	0.0E+00	4507720	NT	Homo sapiens titin (TTN) mRNA
1531	12667	21292	10.12	0.0E+00	4506654	NT	Homo sapiens ribosomal protein L5 (RPL5) mRNA



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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1532	11436	21293	11.11	0.0E+00	M14199.1	NT	Human laminin receptor (2H5 epitope) mRNA, 9' end
1541	11446	21306	5.81	0.0E+00	4507720	NT	Homo sapiens filin (TTN) mRNA
1541	11446	21307	6.81	0.0E+00	4507720	NT	Homo sapiens filin (TTN) mRNA
1543	11448	21308	12.91	0.0E+00	4503058	NT	Homo sapiens chondrinin sulfate proteoglycan 4 (melanoma-associated) (CSFG4), mRNA
1592	11467	21325	1.96	0.0E+00	283738.1	NT	H. sapiens H2BE gene
1593	11468	21326	1.38	0.0E+00	5921400	NT	Homo sapiens butyrophilin, subfamily 2, member A1 (BTN2A1), mRNA
1593	11468	21327	1.38	0.0E+00	5921400	NT	Homo sapiens butyrophilin, subfamily 2, member A1 (BTN2A1), mRNA
1594	11469	21328	5.5	0.0E+00	AV50031	EST_HUMAN	AV50031 GKC Homo sapiens cDNA clone GKCBOR92 5'
1594	11469	21329	6.5	0.0E+00	AV60031.1	EST_HUMAN	AV60031 GKC Homo sapiens cDNA clone GKCBOR92 5'
1596	11469	21330	1.5	0.0E+00	AB040905.1	NT	Homo sapiens mRNA for KIAA1472 protein, partial cds
1596	11470	21331	0.98	0.0E+00	AF157476.1	NT	Homo sapiens DNA polymerase zeta catalytic subunit (REV3) mRNA, complete cds
1597	11470	21332	2.48	0.0E+00	7692183	NT	Homo sapiens KIAA0569 gene product (KIAA0569) mRNA
1597	11470	21333	2.48	0.0E+00	7692183	NT	Homo sapiens KIAA0569 gene product (KIAA0569) mRNA
1597	11478	21335	14.05	0.0E+00	572876	NT	Homo sapiens heat shock 70kD protein 10 (HS271) (HSPA10), mRNA
1597	11478	21337	14.05	0.0E+00	572876	NT	Homo sapiens heat shock 70kD protein 12 (HS271) (HSPA10), mRNA
1597	11480	21339	0.94	0.0E+00	M81803.1	NT	Human sodium channel mRNA
1597	11480	21339	0.94	0.0E+00	M81803.1	NT	Human sodium channel mRNA
1597	11485	21355	4.87	0.0E+00	H26973.1	EST_HUMAN	Y06063.1 Soares adult brain V2B4H559/Homo sapiens cDNA clone IMAGE:18348 3'
1602	11507	21368	- 1.4	0.0E+00	AB046829.1	NT	Homo sapiens mRNA for KIAA1609 protein, partial cds
1602	11507	21369	1.4	0.0E+00	AB046829.1	NT	Homo sapiens mRNA for KIAA1609 protein, partial cds
1646	11549	21410	1.27	0.0E+00	A169104.1	EST_HUMAN	wg1107.31 Soares, NSF_F8_9W_OT_PA_P_51 Homo sapiens cDNA clone IMAGE:2371477 3' similar to TR-062788 062788 GCS2HIS2 ZINC FINGER PROTEIN, ;
1646	11550	21411	3.33	0.0E+00	AF051177.1	NT	Homo sapiens T-cell receptor gamma V1 gene region
1650	11553	21415	1.56	0.0E+00	M29580.1	NT	Human zinc-finger protein 7 (ZFP7) mRNA, complete cds
1650	11553	21416	1.56	0.0E+00	M29580.1	NT	Human zinc-finger protein 7 (ZFP7) mRNA, complete cds
1652	11555	21418	1.22	0.0E+00	4507887	NT	Homo sapiens keratin 18 (KRT18) mRNA
1653	11559	21419	0.92	0.0E+00	7657045	NT	Homo sapiens vesicle exocyst erythroblastosis virus E26 oncogene related (ERC), mRNA
1657	11559	21423	1.11	0.0E+00	4507610	NT	Homo sapiens vesicle exocyst erythroblastosis virus E26 oncogene related (ERC), mRNA
1659	11561	21426	2.69	0.0E+00	F30132.1	EST_HUMAN	yc59d08.1 Soares breast 3NH/Est Homo sapiens cDNA clone IMAGE:182246 5' similar to gb:M6-4069
1659	11561	21427	2.09	0.0E+00	F30132.1	EST_HUMAN	yc59d08.1 Soares breast 3NH/Est Homo sapiens cDNA clone IMAGE:182246 5' similar to gb:M6-4069
1661	11563	21429	1.21	0.0E+00	Z80780.1	NT	GAMMA-GLUTAMYL TRANSPEPTIDASE 5 PRECURSOR (HUMAN);
1661	11563	21430	1.21	0.0E+00	Z80780.1	NT	yc59d08.1 Soares breast 3NH/Est Homo sapiens cDNA clone IMAGE:182246 5' similar to gb:M6-4069
1664	11565		7.85	0.0E+00		NT	H. sapiens H2Bn gene
1664	11565		7.85	0.0E+00		NT	H. sapiens H2Bn gene
1664	11565		7.85	0.0E+00	5031748	NT	Homo sapiens high-mobility group (nonhistone chromosomal) protein 17 (HMG17), mRNA

### Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1672	11574	21442	4.56	0.0E+00	8023941	NT	Homo sapiens FOXJ2 forkhead factor (LOC56810), mRNA
1677	11579	21448	1.02	0.0E+00	MF5950.1	NT	Human hepatocyte growth factor gene, exon 15
1677	11579	21449	1.02	0.0E+00	MF5950.1	NT	Human hepatocyte growth factor gene, exon 15
1680	11582	21463	1.43	0.0E+00	4826278	NT	Human hepatocyte growth factor gene, exon 15
1685	11587	21460	2.69	0.0E+00	AB029542.1	NT	Homo sapiens RNA binding motif protein, Y chromosome, family 1, member A1 (RBMYA1A.1) mRNA
1687	11589			0.0E+00	5944400.1	NT	Homo sapiens WAVE2 mRNA for WASP-family protein, complete cds
1686	12702	21472	0.87	0.0E+00	11549291	NT	TOR catalytic human, Genomic mRNA, 359 nt, segment 1 of 8
1710	11611	21481	1.75	0.0E+00	AF273841.1	NT	Homo sapiens NDCY2 protein (NDCY2), mRNA
1745	12703	21478	13.81	0.0E+00	4509718	NT	Homo sapiens NUCY2 (SMCY) gene, complete cds
1746	11649	21517	0.9	0.0E+00	4507556	NT	Homo sapiens ribosomal protein S2 (RPS2), mRNA
1748	11649	21518	0.9	0.0E+00	4507556	NT	Homo sapiens E1A binding protein p300 (EP300) mRNA
1751	11651	21521	1.23	0.0E+00	U59693.1	NT	Human CSF-1 receptor (FMS) gene, complete cds
1754	11654		1.13	0.0E+00	W76571.1	EST HUMAN	Human CSF-1 receptor (FMS) gene, complete cds
1755	12704	21525	3.28	0.0E+00	4505332	NT	zfp690.11 Soares, fetal, NRH1818W Homo sapiens cDNA clone IMAGE345664.6
1756	11654	21538	7.85	0.0E+00	U14967.1	NT	Homo sapiens nuclear autoantigenic sperm protein (histone-binding) (NASP) mRNA
1767	11655	21541	4.8	0.0E+00	AB002381.1	NT	Human ribosomal protein L21 mRNA, complete cds
							Human mRNA for KIAA0333 gene, partial cds
1768	11657	21542	4.34	0.0E+00	4502264	NT	Homo sapiens activating transcription factor 4 (tax-responsive enhancer element 987) (ATF4), mRNA
1768	11657	21543	4.34	0.0E+00	4502264	NT	Homo sapiens activating transcription factor 4 (tax-responsive enhancer element 987) (ATF4), mRNA
1768	11667	21544	4.34	0.0E+00	4502264	NT	Homo sapiens activating transcription factor 4 (tax-responsive enhancer element 987) (ATF4), mRNA
1781	11680	21559	1.04	0.0E+00	4504226	NT	Homo sapiens immunoglobulin superfamily, member 3 (IGSF3) mRNA, and translated products
1781	11680	21559	1.04	0.0E+00	4504226	NT	Homo sapiens immunoglobulin superfamily, member 3 (IGSF3) mRNA, and translated products
1783	11681	21566	10.22	0.0E+00	6005955	NT	Homo sapiens Kainate-derived POU-domain factor-1 (RPF-1), mRNA
1783	11691	21597	10.22	0.0E+00	6005955	NT	Homo sapiens Kainate-derived POU-domain factor-1 (RPF-1), mRNA
1804	11701	21576	3.19	0.0E+00	4626783	NT	Homo sapiens potassium voltage-gated channel, Shab-related subfamily, member 1 (KCNB1), mRNA
1804	11701	21577	3.19	0.0E+00	4626783	NT	Homo sapiens potassium voltage-gated channel, Shab-related subfamily, member 1 (KCNB1), mRNA
1905	11702	21578	4.52	0.0E+00	U07147.1	NT	Human retinal degeneration slow (RDS) gene, exon 1
1905	11702	21579	4.52	0.0E+00	U07147.1	NT	Human retinal degeneration slow (RDS) gene, exon 1
1809	11706	21584	1.47	0.0E+00	AW207280.1	EST HUMAN	U-HAB1-ash-4.97-AJUL1.1 NCL CGAP Sub3 Homo sapiens cDNA clone IMAGE272333.3
1809	11706	21585	1.47	0.0E+00	AW207280.1	EST HUMAN	U-HAB1-ash-4.97-AJUL1.1 NCL CGAP Sub3 Homo sapiens cDNA clone IMAGE272333.3
1809	11706	21585	1.47	0.0E+00	AW207280.1	EST HUMAN	U-HAB1-ash-4.97-AJUL1.1 NCL CGAP Sub3 Homo sapiens cDNA clone IMAGE272333.3

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1832	11729	21603	2.08	0.0E+00	BE277465.1	EST_HUMAN	601179164F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3547239 5'
1832	11729	21604	2.08	0.0E+00	BE277465.1	EST_HUMAN	601179164F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3547239 5'
1832	11729	21604	0.86	0.0E+00	BC006929.1	EST_HUMAN	RC2-BR0126-203000-012-504 BNC128 Homo sapiens cDNA
1881	11777	21851	3.52	0.0E+00	4606384.1	NT	Homo sapiens RAD1 (S. pombe) homolog (RAD1) mRNA, and translated products
1881	11777	21852	3.52	0.0E+00	4606384.1	NT	Homo sapiens RAD1 (S. pombe) homolog (RAD1) mRNA, and translated products
1889	11785		1.85	0.0E+00	AF157476.1	NT	Homo sapiens DNA polymerase $\alpha$ catalytic subunit (REV3) mRNA, complete cds
1890	12707	21891	4.06	0.0E+00	M69478.1	NT	Human transglutaminase mRNA, complete cds
1890	12707	21892	4.06	0.0E+00	M69478.1	NT	Human transglutaminase mRNA, complete cds
1895	11790	21660	2.28	0.0E+00	4507464.1	NT	Homo sapiens transforming growth factor, beta 3 (TGF $\beta$ 3), mRNA
1895	11760	21870	2.28	0.0E+00	4507464.1	NT	Homo sapiens transforming growth factor, beta 3 (TGF $\beta$ 3), mRNA
1898	11794		5.26	0.0E+00	AF240788.1	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds
1903	11769		1.9	0.0E+00	M55622.1	NT	Human lactoperoxidase   pseudogene 1
1905	12708	21878	0.94	0.0E+00	5901305.1	NT	Homo sapiens butyrophilin, subfamily 3, member A2 (BTN3A2), mRNA
1913	11808	21853	1.87	0.0E+00	4506282.1	NT	Homo sapiens histidine ammonia-lyase (HAL) mRNA
1913	11808	21853	1.37	0.0E+00	4506282.1	NT	Homo sapiens histidine ammonia-lyase (HAL) mRNA
1924	11819		1.12	0.0E+00	AL103262.2	NT	Homo sapiens chromosome 21 segment HS21C032
1926	11821	21700	1.15	0.0E+00	8400716	NT	Homo sapiens nucleolin (NEB), mRNA
1926	11821	21701	1.15	0.0E+00	8400716	NT	Homo sapiens nucleolin (NEB), mRNA
1927	11822	21702	8.13	0.0E+00	4826638	NT	Homo sapiens actinin, alpha 4 (ACTN4) mRNA
1927	11822	21703	8.13	0.0E+00	4826638	NT	Homo sapiens actinin, alpha 4 (ACTN4) mRNA
1937	11832	21715	1.21	0.0E+00	AB016333.1	NT	Homo sapiens mRNA for KIAA0750 protein, partial cds
1937	11832	21716	1.21	0.0E+00	AB016333.1	NT	Homo sapiens mRNA for KIAA0750 protein, partial cds
1943	11836	21720	2.01	0.0E+00	M33782.1	NT	Human TFE3 protein mRNA, partial cds
1943	11836	21721	2.01	0.0E+00	M33782.1	NT	Human TFE3 protein mRNA, partial cds
1945	11940	21722	1.33	0.0E+00	AW168024.1	EST_HUMAN	x89501.x1 NCI CGAP_Pant1 Homo sapiens cDNA clone IMAGE:2670913 3'
1945	11940	21723	1.33	0.0E+00	AW168024.1	EST_HUMAN	x89501.x1 NCI CGAP_Pant1 Homo sapiens cDNA clone IMAGE:2670913 3'
1946	11841	21724	8.4	0.0E+00	6912457	NT	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
1946	11841	21725	8.4	0.0E+00	6912457	NT	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
1946	11843	21727	0.92	0.0E+00	Z17595.1	NT	H. sapiens genes for semaphorin 1 and semaphorin 11
1948	11843	21726	0.92	0.0E+00	Z17595.1	NT	H. sapiens genes for semaphorin 1 and semaphorin 11
1955	11950	21737	2.31	0.0E+00	AB040466.1	NT	Homo sapiens mRNA for KIAA1513 protein, partial cds
1975	11988	21759	0.86	0.0E+00	AF733941.1	NT	Homo sapiens SMCY (SMCY) gene, complete cds
1975	11988	21760	0.86	0.0E+00	AF733941.1	NT	Homo sapiens SMCY (SMCY) gene, complete cds

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Meat Similar BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2011	11903	21793	1.09	0.0E+00	BE43215.1	EST_HUMAN	1901679806FT NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3835168 5'
2011	11903	21794	1.09	0.0E+00	BE43215.1	EST_HUMAN	1901679806FT NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3835168 5'
2013	11905	21795	0.96	0.0E+00	4503648	NT	Homo sapiens coagulation factor IX (plasma thromboplastic component, Christmas disease, hemophilia B) (F9) mRNA
2014	11906	21796	5.46	0.0E+00	AU140331.1	EST_HUMAN	AUT40331 Homo sapiens cDNA clone PLACE:000321 5'
2015	11314	21177	1.01	0.0E+00	7705595	NT	Homo sapiens KIAA1114 protein (KIAA1114), mRNA
2016	11314	21179	1.01	0.0E+00	7705595	NT	Homo sapiens KIAA1114 protein (KIAA1114), mRNA
2017	11908	21799	1.95	0.0E+00	AA077586.1	EST_HUMAN	7822E10 Chromosome 7 Fetal Brain cDNA Library Homo sapiens cDNA clone 7822E10
2017	11908	21799	1.95	0.0E+00	AA077586.1	EST_HUMAN	7822E10 Chromosome 7 Fetal Brain cDNA Library Homo sapiens cDNA clone 7822E10
2016	11910	21798	2.34	0.0E+00	A4077586.1	EST_HUMAN	Homo sapiens similar to rat integral membrane glycoprotein POM121 (POM121L1), mRNA
2021	11912		1.6	0.0E+00	7657468	NT	Homo sapiens phosphodiesterase 4A, cAMP-specific, rod, alpha (PDE4A), mRNA
2021	11912		1.6	0.0E+00	4659093	NT	HSC000321 normalized infant brain cDNA Homo sapiens cDNA clone c0002
2022	11913	21802	0.82	0.0E+00	243386.1	EST_HUMAN	cc000531 NCI_L102 Homo sapiens cDNA clone IMAGE:188871 3' similar to contains Alu repetitive element
2024	11915		1.94	0.0E+00	A244297.1	EST_HUMAN	601485146FT NIH_MGC_69 Homo sapiens cDNA clone IMAGE:3997474 5'
2029	11920	21811	2.60	0.0E+00	BE677235.1	EST_HUMAN	601023604FT NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4135320 5'
2031	11922	21813	1.8	0.0E+00	BS15323.1	EST_HUMAN	601023604FT NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4135320 5'
2031	11922	21814	1.8	0.0E+00	BS15323.1	EST_HUMAN	601023604FT NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4135320 5'
2035	11926	21819	2.42	0.0E+00	BE697125.1	EST_HUMAN	RC3-CT0413-270700-022-610 CT0413 Homo sapiens cDNA
2035	11926	21820	2.42	0.0E+00	BE697125.1	EST_HUMAN	RC3-CT0413-270700-022-610 CT0413 Homo sapiens cDNA
2040	11931	21828	2.53	0.0E+00	J06030.1	NT	Human plasma membrane calcium ATPase isoform 2 (ATP2B2) mRNA, complete cds
2040	11931	21827	2.53	0.0E+00	J06030.1	NT	Human plasma membrane calcium ATPase isoform 2 (ATP2B2) mRNA, complete cds
2045	11936	21831	1.32	0.0E+00	4738488	NT	Homo sapiens GTP binding protein 1 (GTPBP1) mRNA
2045	11936	21831	1.32	0.0E+00	4738488	NT	Homo sapiens GTP binding protein 1 (GTPBP1) mRNA
2067	11957		2.53	0.0E+00	BE707964.1	EST_HUMAN	QV1-GN0065-140800-318-e10 GN0065 Homo sapiens cDNA
2068	11958		1.13	0.0E+00	AF018993.1	NT	Homo sapiens X-linked juvenile retinoschisis protein (XLR31) gene, exon 6 and complete cds
2070	11960	21854	3.09	0.0E+00	BF027592.1	EST_HUMAN	60107206FT NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3994785 5'
2071	11961	21855	2	0.0E+00	4503795	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds
2073	11963	21859	0.99	0.0E+00	AF240786.1	NT	IL3-CT0219-271009-022-G10 CT0219 Homo sapiens cDNA
2074	11964	21857	1.16	0.0E+00	AW752708.1	EST_HUMAN	QV-ET005-020399-002 BT005 Homo sapiens cDNA
2076	11966	21859	1.90	0.0E+00	AB049400.1	EST_HUMAN	QV-ET005-020399-002 BT005 Homo sapiens cDNA
2076	11966	21860	1.90	0.0E+00	AB049400.1	EST_HUMAN	Homo sapiens potassium large conductance calcium-activated channel, subfamily M, beta member 3-like (KCNMB3L), mRNA
2112	12001		1.19	0.0E+00	7657232	NT	Human DNA-binding protein mRNA, 3' end
2132	12020		1.6	0.0E+00	144787.1	NT	

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Description
2138	12026	21922	1.02	0.0E+00	BE274966.1	EST_HUMAN	g01122339f1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:334668 5'
2140	12028	21925	1.09	0.0E+00	AV7865.1	NT	Human mRNA for KIA0244 gene, partial cds
2141	12029	21926	10.46	0.0E+00	AV7865.1	EST_HUMAN	AV7865.288 CB Homo sapiens cDNA clone CNBCE08 5'
2141	12029	21927	10.46	0.0E+00	AV7865.288.1	EST_HUMAN	AV7865.288 CB Homo sapiens cDNA clone CNBCE08 5'
2143	12031	21929	1.4	0.0E+00	AA031091.1	EST_HUMAN	cc32c7.1 s1 NC1 CGAP_L65 Homo sapiens cDNA clone IMAGE:167896 3'
2145	12033		0.9	0.0E+00	M18628.1	NT	Human apolipoprotein B-100 (apoB) gene, exon 22 through 29
2148	12036	21933	17.1	0.0E+00	BF544434.1	EST_HUMAN	g02014829f1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:4160734 5'
2149	12037	21934	11.29	0.0E+00	BE74899.1	EST_HUMAN	g01572189f1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3897457 5'
2152	12040	21937	2.35	0.0E+00	BF37387.1	EST_HUMAN	GM1-TN0141-220900-439-508 TN0141 Homo sapiens cDNA
2152	12040	21938	2.35	0.0E+00	BF53780.1	EST_HUMAN	GM1-TN0141-220900-439-508 TN0141 Homo sapiens cDNA
2156	12714	21943	1.77	0.0E+00	BF531917.1	EST_HUMAN	g0190261f1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4126522 5'
2159	12046	21946	1.82	0.0E+00	BE018790.1	EST_HUMAN	h346402.v1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3049082 5' similar to TR-Q16170 Q16170
2160	12047	21947	0.92	0.0E+00	AA042813.1	EST_HUMAN	345c07.1 Sources, pregnant uterus Nkx-2.1 Homo sapiens cDNA clone IMAGE:485540 3' similar to
2160	12047	21948	0.92	0.0E+00	AA042813.1	EST_HUMAN	g01668587 cds1 OLFACTORY RECEPTOR-LIKE PROTEIN HMPDYE (HUMAN);
2168	12055	21950	2.32	0.0E+00	AL103204.2	NT	345c07.1 Sources, pregnant uterus Nkx-2.1 Homo sapiens cDNA clone IMAGE:485540 3' similar to
2168	12055	21957	2.32	0.0E+00	AL103204.2	NT	g01668587 cds1 OLFACTORY RECEPTOR-LIKE PROTEIN HMPDYE (HUMAN);
2168	12055	21958	2.63	0.0E+00	7652401	NT	Homo sapiens chromosome 21 segment HS21C03.4
2169	12056	21959	2.63	0.0E+00	7652401	NT	Homo sapiens KIA0062 protein (KIA0062), mRNA
2174	12061		1.04	0.0E+00	U9264.1	NT	Homo beta-prime-oxalopig (BAU22) gene, exon 16
2193	12080	21984	7.56	0.0E+00	4657566	NT	Homo sapiens ETA binding protein p300 (EP300) mRNA
2199	12066	21985	1.44	0.0E+00	7022401	NT	Homo sapiens KIA0062 protein (KIA0062), mRNA
2200	12063	21986	1.09	0.0E+00	BE06281.1	EST_HUMAN	Homo sapiens KIA0062 protein (KIA0062), mRNA
2200	12066	21989	0.87	0.0E+00	BE060583.1	EST_HUMAN	g01433529f1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3891807 5'
2209	12065	22000	0.87	0.0E+00	BE060583.1	EST_HUMAN	g01490308f1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3897457 5'
2212	12068	22002	1.36	0.0E+00	AB037784.1	NT	g01490308f1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3897457 5'
2253	12137	22934	4.16	0.0E+00	11545748	NT	Homo sapiens mRNA for KIA1363 protein, partial cds
2253	12137	22935	4.16	0.0E+00	11545748	NT	Homo sapiens differentially expressed in FDCP (mouse homolog) 6 (DE6), mRNA
2254	12138	22936	2.51	0.0E+00	AA764004.1	EST_HUMAN	Homo sapiens differentially expressed in FDCP (mouse homolog) 6 (DE6), mRNA
2256	12140	22939	2.21	0.0E+00	AA764004.1	EST_HUMAN	cc32c7.1 Sources, fetal liver, spleen NFILS_311 Homo sapiens cDNA clone IMAGE:1674829 3'
2256	12140	22939	2.21	0.0E+00	AA764004.1	EST_HUMAN	z/2/Bat1.1.1 Sources, fetal, testis, N2cHf8, sw Homo sapiens cDNA clone IMAGE:769740 5'
2258	12142	22941	2.23	0.0E+00	BF442801.1	EST_HUMAN	z/2/Bat1.1.1 Sources, fetal, testis, N2cHf8, sw Homo sapiens cDNA clone IMAGE:769740 5'
2258	12142	22941	2.23	0.0E+00	BF442801.1	EST_HUMAN	g02021846f1 NC1 CGAP_Bm67 Homo sapiens cDNA clone IMAGE:4157339 5'

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2263	12147	22047	1.19	0.0E+00	U02840.1	NT	Homo sapiens potassium channel K2.1 mRNA, complete cds
2264	12148	22048	2.03	0.0E+00	6325466	NT	Homo sapiens flavin containing monooxygenase 3 (FMO3), mRNA
2271	12155	22054	1.0	0.0E+00	BE67606.1	EST HUMAN	712262.X1 NCI CGAP CLL11 Homo sapiens cDNA clone IMAGE:3295370 3' similar to TR-064638 C94939 KIAA0057 PROTEIN ;
2274	12158	22056	10.06	0.0E+00	AF044571.1	NT	Homo sapiens phosphotyrosine kinase alpha subunit (PHK42) gene, exon 32
2276	12159	22057	2.72	0.0E+00	A625542.1	EST HUMAN	t57c08.X1 NCI CGAP U12 Homo sapiens cDNA clone IMAGE:2283182 3'
2280	12164	22061	1.76	0.0E+00	6603178	EST HUMAN	Homo sapiens sperm specific antigen 2 (SSFA2), mRNA
2280	12164	22062	1.76	0.0E+00	6603178	NT	Homo sapiens sperm specific antigen 2 (SSFA2), mRNA
2281	12173	22072	4.26	0.0E+00	AF056332.1	NT	Homo sapiens titin (TTN) gene, alternative splice products, partial cds
2281	12173	22073	4.26	0.0E+00	AF056332.1	NT	Homo sapiens titin (TTN) gene, alternative splice products, partial cds
2280	12192	22079	2.88	0.0E+00	6174678	NT	Homo sapiens signal regulatory protein, beta, 1 (SIRP-BETA-1) mRNA
2304	12185	22083	1.75	0.0E+00	AU131142.1	EST HUMAN	AU131142.NT2RP3 Homo sapiens cDNA clone IMAGE:3441003 5'
2305	12186	22084	5.71	0.0E+00	BE79428.1	EST HUMAN	60165948.SFT NIH LMGC 7 Homo sapiens cDNA clone IMAGE:3441003 5'
2306	12187	22084	0.98	0.0E+00	AF66706.1	EST HUMAN	MRT-SNG033-120400-202-404 SNG033 Homo sapiens cDNA
2307	12188	22085	1.67	0.0E+00	7620017	NT	Homo sapiens KIA02344 protein (KIA02344), mRNA
2308	12189	22086	1.41	0.0E+00	4758497	NT	Homo sapiens hexose-6-phosphate dehydrogenase (glucose 1-dehydrogenase) (H6PD), mRNA
2308	12189	22087	1.41	0.0E+00	4758497	NT	Homo sapiens hexose-6-phosphate dehydrogenase (glucose 1-dehydrogenase) (H6PD), mRNA
2309	12190		2.31	0.0E+00	AF280107.1	NT	Homo sapiens cytochrome P450 polypeptide 43 (CYP3A43) gene, partial cds; cytochrome P450 polypeptide 4 (CYP3A4) and cytochrome P450 polypeptide 7 (CYP3A7) genes, complete cds, and cytochrome P450 polypeptide 5 (CYP3A9) gene, partial cds
2310	12191	22088	7.57	0.0E+00	AU119882.1	EST HUMAN	AU119882.HEMBA1 Homo sapiens cDNA clone HEMBA102893 5'
2310	12191	22089	7.57	0.0E+00	AU119882.1	EST HUMAN	AU119882.HEMBA1 Homo sapiens cDNA clone HEMBA102893 5'
2310	12191	22090	7.57	0.0E+00	AU119882.1	EST HUMAN	AU119882.HEMBA1 Homo sapiens cDNA clone HEMBA102893 5'
2327	12209		0.96	0.0E+00	BE91424.1	EST HUMAN	MR0-HB070-090000-028-012 DN0070 Homo sapiens cDNA
2363	12243	22138	1.34	0.0E+00	AU119882.1	EST HUMAN	AU119882.HEMBA1 Homo sapiens cDNA clone HEMBA1001155 5'
2366	12248		3.64	0.0E+00	A042035.1	EST HUMAN	ex06b02.X1 Soares, NHHMPA_S1 Homo sapiens cDNA clone IMAGE:1600983 3' similar to TR-006892 DB066200.200KDA PHOSPHATIDYLINOSITOL 4-KINASE ;
2369	12249	22141	0.68	0.0E+00	A042035.1	EST HUMAN	ex06b02.X1 Soares, NHHMPA_S1 Homo sapiens cDNA clone IMAGE:1600983 3' similar to TR-006892 DB066200.200KDA PHOSPHATIDYLINOSITOL 4-KINASE ;
2371	12251		2.03	0.0E+00	BE99006.1	EST HUMAN	xv1807.X1 Soares, NHHMPA_S1 Homo sapiens cDNA clone IMAGE:3918108 5'
2382	1262		1.63	0.0E+00	A0409822.1	EST HUMAN	AF050022.HaJ cDNA (T.Nmno) Homo sapiens cDNA similar to adenylylate kinase isozyme 2
2386	1265	22156	5.69	0.0E+00	6009002	NT	Homo sapiens glutamate receptor, ionotropic, N-methyl D-aspartate 2A (GRIN2A) mRNA
2390	1268	22162	2.48	0.0E+00	D65606.1	NT	Homo sapiens gene for cholecystokinin type-A receptor, complete cds
2390	1268	22163	2.48	0.0E+00	D65606.1	NT	Homo sapiens gene for cholecystokinin type-A receptor, complete cds

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Mod Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2398	12276	22172	2.28	0.0E+00	AF100278.1	NT	Homo sapiens immunoglobulin-like transcript 1 to variant 4 (ILT1c) gene, exon 6
2402	12279	22170	3.95	0.0E+00	BF346274.1	EST_HUMAN	60201805BF1 NCI CGAP, Bm07 Homo sapiens cDNA clone IMAGE:4153070 5'
2410	12287	22185	3.95	0.0E+00	6728777	NT	Homo sapiens collagen, type XI, alpha 1 (COL12A1), mRNA
2414	12291	22188	0.87	0.0E+00	BE031003.1	EST_HUMAN	GMC-MT0033-150600-428-h11 MT0033 Homo sapiens cDNA
2414	12291	22188	0.87	0.0E+00	BE031003.1	EST_HUMAN	GMC-MT0033-150600-428-h11 MT0033 Homo sapiens cDNA
2418	12296	22193	2.27	0.0E+00	BF369144.1	EST_HUMAN	60218455BF1 NIH_MGC, 42 Homo sapiens cDNA clone IMAGE:4300383 3'
2428	12308	22201	2.66	0.0E+00	AW469922.1	EST_HUMAN	h040434.X1 NCI CGAP, X412 Homo sapiens cDNA clone IMAGE:3072760 5'
2430	12307	22202	3.45	0.0E+00	AW50101.1	EST_HUMAN	U1HF-BP02-ali-c-07-04111 NIH_MGC, 51 Homo sapiens cDNA clone IMAGE:3072760 5'
2444	12321	22219	2.08	0.0E+00	5453295	NT	Homo sapiens protein kinase, AMP-activated, alpha 2 catalytic subunit (PRKAA2) mRNA
2444	12321	22220	2.08	0.0E+00	5453295	NT	Homo sapiens protein kinase, AMP-activated, alpha 2 catalytic subunit (PRKAA2) mRNA
2462	12335	22233	16.13	0.0E+00	AW813803.1	EST_HUMAN	RG5-S1017-307030916-c44 S10197 Homo sapiens cDNA
2463	12335	21671	1.18	0.0E+00	BE75542.1	EST_HUMAN	Homo sapiens death receptor 6 (DR6), mRNA
2464	12340	22234	1.9	0.0E+00	BF539432.1	EST_HUMAN	Homo sapiens death receptor 6 (DR6), mRNA
2467	12343	22236	2.25	0.0E+00	Z3384.2	NT	U1H-BM-303-X-08-ZUL31 NCI CGAP, S133 Homo sapiens cDNA clone IMAGE:3085535 3'
2469	12346	22239	5.67	0.0E+00	5453791	NT	Homo sapiens mRNA for menin and transport protein (Xc gene)
2471	12347	22240	1.96	0.0E+00	BE103781.1	EST_HUMAN	Homo sapiens platelet-derived growth factor receptor-IIIa (PDGFR-III), mRNA
2472	12348	22240	1.96	0.0E+00	BE103781.1	EST_HUMAN	Homo sapiens platelet-derived growth factor receptor-IIIa (PDGFR-III), mRNA
2473	12348	22241	65.78	0.0E+00	BE105865.1	EST_HUMAN	Homo sapiens similar to rat integral membrane glycoprotein POU121 (P-OU121.1), mRNA
2474	12350	22242	1.14	0.0E+00	8023340	NT	RC4-H10276-162000-013-403 H10276 Homo sapiens cDNA
2475	12351	22243	3.21	0.0E+00	U62339.1	NT	Homo sapiens hypothetical protein FLJ20366 (FLJ20366), mRNA
2481	12357	22246	1.84	0.0E+00	BE386490.1	EST_HUMAN	Homo sapiens Sec22 (Sec22) mRNA, complete cds
2480	12361	22255	4.39	0.0E+00	BE75911.1	EST_HUMAN	601508211F1 NIH_MGC, 71 Homo sapiens cDNA clone IMAGE:3909866 5'
2480	12361	22256	4.39	0.0E+00	BE75911.1	EST_HUMAN	601489241F1 NIH_MGC, 69 Homo sapiens cDNA clone IMAGE:3909866 5'
2480	12361	22256	0.97	0.0E+00	AF245905.1	EST_HUMAN	601489241F1 NIH_MGC, 69 Homo sapiens cDNA clone IMAGE:3909866 5'
2480	12361	22256	0.97	0.0E+00	AF245905.1	EST_HUMAN	601489241F1 NIH_MGC, 69 Homo sapiens cDNA clone IMAGE:3909866 5'
2504	12379	22267	1.27	0.0E+00	BE339021.1	EST_HUMAN	Homo sapiens adenosine, complete cds
2504	12379	22267	1.27	0.0E+00	BE339021.1	EST_HUMAN	60109473BF1 NIH_MGC, 10 Homo sapiens cDNA clone IMAGE:3451161 5'
2509	12383	22274	3.8	0.0E+00	AU143277.1	EST_HUMAN	AU143277 Y79AA1 Homo sapiens cDNA clone Y79AA1001673 5'
2509	12383	22275	3.8	0.0E+00	AU143277.1	EST_HUMAN	AU143277 Y79AA1 Homo sapiens cDNA clone Y79AA1001673 5'
2510	12384	22276	1.19	0.0E+00	BE392896.1	EST_HUMAN	601103312F1 NIH_MGC, 15 Homo sapiens cDNA clone IMAGE:2987655 5'
2510	12384	22277	1.19	0.0E+00	BE392896.1	EST_HUMAN	601103312F1 NIH_MGC, 15 Homo sapiens cDNA clone IMAGE:2987655 5'
2511	12385	22278	0.99	0.0E+00	BF23941.1	EST_HUMAN	7427124 NCI CGAP, G3G Homo sapiens cDNA clone IMAGE:3002446 000246
2514	12388	22280	7.65	0.0E+00	AF245905.1	NT	HYPOHETHEL 9.3 VD PROTEIN ;
2540	12414	22304	1.05	0.0E+00	BE339613.1	EST_HUMAN	Homo sapiens adenosine, complete cds
							601173631F1 NIH_MGC, 17 Homo sapiens cDNA clone IMAGE:3529159 5'

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2563	12654	22318	2.37	0.0E+00	AB037838.1	NT	Homo sapiens mRNA for KIAA1415 protein, partial cds
2564	12654	22319	2.37	0.0E+00	AB037839.1	NT	Homo sapiens mRNA for KIAA1415 protein, partial cds
2565	12426		3.85	0.0E+00	BF138336.1	EST_HUMAN	UHH-BW-1amp-124-UJ1st NCI CGAP_Sub7 Homo sapiens cDNA clone IMAGE:3070631 3'
2566	12432	22325	2.8	0.0E+00	BF192818.1	EST_HUMAN	002152553.F1 NIH MSC_81 Homo sapiens cDNA clone IMAGE:4263612 5'
2567	12432		1.16	0.0E+00	BE016956.1	EST_HUMAN	60127567.F1 NIH MSC_39 Homo sapiens cDNA clone IMAGE:3821765 5'
2568	12440	22332	1.34	0.0E+00	AB037742.1	NT	Homo sapiens mRNA for KIAA1321 protein, partial cds
2569	12441	22333	0.97	0.0E+00	AB171737.1	EST_HUMAN	tn18008.x1 NCI CGAP_Bm28 Homo sapiens cDNA clone IMAGE:2160565 3' similar to gbL20977 CALCIUM-TRANSPORTING ATPASE PLASMA MEMBRANE, BRAIN ISOFORM 2 (HUMAN); Homo sapiens TATA box binding protein (TBP)-associated factor, RNA polymerase II, 28KD (TAI27) mRNA
2571	12442	22334	2.27	0.0E+00	50321520	NT	Homo sapiens mRNA for KIAA1438 protein, partial cds
2573	12444	22335	5.78	0.0E+00	AB037855.1	NT	Homo sapiens mRNA for KIAA1438 protein, partial cds
2574	12445	22337	1.03	0.0E+00	BE705445.1	EST_HUMAN	601590108.F1 NIH MSC_7 Homo sapiens cDNA clone IMAGE:3544304 5'
2574	12445	22338	1.03	0.0E+00	BE705445.1	EST_HUMAN	601590108.F1 NIH MSC_7 Homo sapiens cDNA clone IMAGE:3544304 5'
2577	12448	22339	1.1	0.0E+00	BE933328.1	EST_HUMAN	60113722.F1 NIH MSC_15 Homo sapiens cDNA clone IMAGE:3081389 5'
2581	12450		10.43	0.0E+00	BE762472.1	EST_HUMAN	601584930.F1 NIH MSC_7 Homo sapiens cDNA clone IMAGE:3832223 5'
2585	12455	22345	2.46	0.0E+00	45049986	NT	Homo sapiens tRNAPhe (cytosine monophosphate) rhydropyrenase 1 (LIPSPH1) mRNA
2591	12727	22365	7.02	0.0E+00	45077220	NT	Homo sapiens tRNAIle (TTC) mRNA
2598	12476		1.08	0.0E+00	U76027.1	NT	Homo sapiens tyrosine kinase (BTK), alpha-D-galactosidase A (GLA), L44-like ribosomal protein (L44L), and FTS3 (FTPS3) genes, complete cds
2599	12477	22369	5.19	0.0E+00	AF173227.1	NT	Homo sapiens guanylate cyclase-activating protein 2 (GUCA1B) gene, exon 1
2599	12477	22370	1.17	0.0E+00	AB011108.1	NT	Homo sapiens mRNA for KIAA0059 protein, partial cds
2613	12481	22373	0.96	0.0E+00	AU133985.1	EST_HUMAN	AUT133985.N12694 Homo sapiens cDNA clone NT25P3000770 5'
2616	12484	22374	1.41	0.0E+00	M60225.1	NT	Human bulbar pemphigoid antigen (BPAG1) mRNA, complete cds
2617	12485	22374	1.41	0.0E+00	AU130403.1	EST_HUMAN	AUT130403.N12693 Homo sapiens cDNA clone NT25P3000770 5'
2619	12487	22375	1.21	0.0E+00	AU130403.1	EST_HUMAN	AUT130403.N12693 Homo sapiens cDNA clone NT25P3000770 5'
2619	12487	22377	1.21	0.0E+00	AW837015.1	EST_HUMAN	RCU070066.229300.041-407 OT0086 Homo sapiens cDNA
2622	12490	22380	1.26	0.0E+00	AW837015.1	EST_HUMAN	RCU070066.229300.041-407 OT0086 Homo sapiens cDNA
2626	12494	22385	1	0.0E+00	BF100016.1	EST_HUMAN	7115015.x1 NCI CGAP_Cot6 Homo sapiens cDNA clone IMAGE:3316085 3'
2627	12494	22386	3.25	0.0E+00	BE3483105.1	EST_HUMAN	60126871.F1 NIH MSC_19 Homo sapiens cDNA clone IMAGE:3928025 5'
2628	12496	22390	2.74	0.0E+00	BE331253.1	EST_HUMAN	6017837.F1 NIH MSC_39 Homo sapiens cDNA clone IMAGE:3810257 5'
2656	12523	22413	1.74	0.0E+00	89228243	NT	Homo sapiens hypochlorite protein FLJ11052 (FLJ11052), mRNA H189414 HCC cell line (metastasis to liver in mouse)   Homo sapiens cDNA 5' end similar to ribosomal protein L29
2650	12555		8.72	0.0E+00	AA316723.1	EST_HUMAN	601586255.F1 NIH MSC_7 Homo sapiens cDNA clone IMAGE:3543391 5'
2651	12556	22443	0.88	0.0E+00	BE714984.1	EST_HUMAN	601586255.F1 NIH MSC_7 Homo sapiens cDNA clone IMAGE:3543391 5'
2658	12562	22452	3.59	0.0E+00	U36253.1	NT	Human beta-prime-subunit (BAM12) gene, exon 5



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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2700	12664	22454	1.08	0.0E+00	7609577	NT	Homo sapiens neuregulin 1 (NRG1) transcript variant SMDF, mRNA
2701	12665	22455	10.23	0.0E+00	AF110763.1	NT	Homo sapiens skeletal muscle LIM-protein 1 (FHL1) gene, complete cds
2708	12671	22462	10.37	0.0E+00	BE796378.1	EST_HUMAN	601891991F1 NIH MG_C, 7 Homo sapiens cDNA clone IMAGE:3046883 5'
2709	12672	22463	9.2	0.0E+00	BE650433.1	EST_HUMAN	602165022F1 NIH MG_C, 83 Homo sapiens cDNA clone IMAGE:3297132 5'
2712	12731	22467	13.51	0.0E+00	BE650433.1	EST_HUMAN	601333488F1 NIH MG_C, 39 Homo sapiens cDNA clone IMAGE:389564 5'
2713	12675		1.28	0.0E+00	AV721647.1	EST_HUMAN	AV721647 HTB Homo sapiens cDNA clone HTBBY03 5'
2715	12677	22470	2.17	0.0E+00	5174493	NT	Homo sapiens spermatogenesis associated PDI (KIAA0757) mRNA
2716	12677	22471	2.17	0.0E+00	5174493	NT	Homo sapiens spermatogenesis associated PDI (KIAA0757) mRNA
2716	12678	22472	0.9	0.0E+00	8922441	NT	Homo sapiens hypochlorite protein FLJ20477 (FLJ20477), mRNA
2717	12678	22473	0.9	0.0E+00	8922441	NT	Homo sapiens hypochlorite protein FLJ20477 (FLJ20477), mRNA
2717	12679	22474	2.2	0.0E+00	AF290195.1	NT	Homo sapiens hypertension-related calcium-regulated gene mRNA, complete cds
2718	12680		15.67	0.0E+00	AV651069.1	EST_HUMAN	AV651069 GLG Homo sapiens cDNA clone GLGCD07 3'
2718	12681	22475	1.72	0.0E+00	BE377807.1	EST_HUMAN	GMT-TN0141-255920-438-B08 TN0141 Homo sapiens cDNA
2719	12681	22476	1.72	0.0E+00	BE377807.1	EST_HUMAN	GMT-TN0141-255920-438-B08 TN0141 Homo sapiens cDNA
2723	12685	22479	3.21	0.0E+00	4757093	NT	Homo sapiens cerebellar degeneration-related protein (34D) (CDR1) mRNA
2723	12685	22480	3.21	0.0E+00	4757093	NT	Homo sapiens cerebellar degeneration-related protein (34D) (CDR1) mRNA
2727	12689	22483	3.21	0.0E+00	BE417103.1	EST_HUMAN	601891991F1 NIH MG_C, 9 Homo sapiens cDNA clone IMAGE:3029472 5'
2730	12692	22485	0.67	0.0E+00	BE758351.1	EST_HUMAN	FCU-HT0567-170320-012-511 HT0567 Homo sapiens cDNA
2741	12693		1.3	0.0E+00	AL103201.2	NT	Homo sapiens chromosome 21 agmatase HST10301
2742	12694	22498	3.47	0.0E+00	BF43110.1	EST_HUMAN	UHL-SMT-arms-4-0-0-0-1at NCI CGAP, SubT Homo sapiens cDNA clone IMAGE:3071340 3'
2748	12610		1.07	0.0E+00	4600398	NT	Homo sapiens chondrin sulfate proteoglycan 4 (matrilin-associated) (CSPG4), mRNA
2754	12616	22507	4.95	0.0E+00	BF677694.1	EST_HUMAN	602085972F1 NIH MG_C, 83 Homo sapiens cDNA clone IMAGE:4248815 5'
2759	12620	22513	1.73	0.0E+00	7477522	NT	Homo sapiens protein tyrosine phosphatase, receptor type, 1 (PTPRT), mRNA
2761	12623	22515	6.50	0.0E+00	AV725334.1	EST_HUMAN	AV725334 HTG Homo sapiens cDNA clone HTGCCA03 5'
2761	12623	22516	9.56	0.0E+00	AV725334.1	EST_HUMAN	AV725334 HTG Homo sapiens cDNA clone HTGCCA03 5'
2763	12625		11.15	0.0E+00	AB78103.1	EST_HUMAN	a05504.YJ Schneider field brain 00004 Homo sapiens cDNA clone IMAGE:2518603 5' similar to
2766	12628	22521	1.97	0.0E+00	BF550961.1	EST_HUMAN	SWR18A_HUMAN P40429 605 RIBOSOMAL PROTEIN L13A ;
2767	12629	22522	1.97	0.0E+00	BE677668.1	EST_HUMAN	602071657F1 NCI CGAP, Bmd7 Homo sapiens cDNA clone IMAGE:4214679 5'
2769	12631	22523	2.11	0.0E+00	AU131494.1	EST_HUMAN	601450912F1 NIH MG_C, 65 Homo sapiens cDNA clone IMAGE:3854642 5'
2769	12631	22524	1.11	0.0E+00	AU131494.1	EST_HUMAN	AU131494 NT2P33 Homo sapiens cDNA clone NT2P3302072 5'
2770	12632	22525	1.11	0.0E+00	BE300344.1	EST_HUMAN	600944764F1 NIH MG_C, 17 Homo sapiens cDNA clone IMAGE:2560906 5'
2770	12632	22526	10.1	0.0E+00	BE300344.1	EST_HUMAN	600944764F1 NIH MG_C, 17 Homo sapiens cDNA clone IMAGE:2560906 5'
2775	10161	19966	4.6	0.0E+00	576830.1	NT	glycoprotein D-Euffy group antigen [human, blood, Genomic DNA, 3028 nt]

Table 4  
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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2776	12695		1.94	0.0E+00	AB03281.1	NT	Homo sapiens BTORG2 mRNA for F-box and WD-repeat protein isoform C, complete cds
2784	10649	20479	1.37	0.0E+00	AF284750.1	NT	Homo sapiens ALR-like protein mRNA, partial cds
2784	10649	20480	1.37	0.0E+00	AF284750.1	NT	Homo sapiens ALR-like protein mRNA, partial cds
2785	10641	20784	3.96	0.0E+00	4503202	NT	Homo sapiens cyclochrome P450, subfamily 1 (doxh-inducible), polypeptide 1 (glaucoma 3, primary infantile) (CYP1B1) mRNA
2786	10641	20785	3.96	0.0E+00	4503202	NT	Homo sapiens cyclochrome P450, subfamily 1 (doxh-inducible), polypeptide 1 (glaucoma 3, primary infantile) (CYP1B1) mRNA
2805	12735	22534	2.30	0.0E+00	X85890.1	NT	H. sapiens serine hydroxymethyltransferase pseudogene
2806	12736		1.27	0.0E+00	AF068924.1	NT	Homo sapiens 5-aminolevulinic acid synthase 2 (ALAS2) gene, complete cds
2808	12738		1.1	0.0E+00	AB04060.1	NT	Homo sapiens mRNA for KIAA1827 protein, partial cds
2814	12743		1.07	0.0E+00	AL230452.1	NT	Homo sapiens partial rpl3 gene for ribosomal protein L3, U82 snoRNA, U83a snoRNA and U83b snoRNA genes
2815	12744	22539	2.24	0.0E+00	AL03201.2	NT	Homo sapiens chromosome 21 segment HS21C001
2819	12748	22541	5.94	0.0E+00	V69902.1	NT	Human AHNK nucleoprotein mRNA, 5' end
2821	12751	22543	1.80	0.0E+00	BE154504.1	EST_HUMAN	PMCH10343-281390-003-402 HT0343 Homo sapiens cDNA
2822	12751	22544	1.80	0.0E+00	BE154504.1	EST_HUMAN	PMCH10343-281390-003-402 HT0343 Homo sapiens cDNA
2824	12753		1.35	0.0E+00	K73428.1	NT	H. sapiens l33 gene for HLH type transcription factor
2826	12755		2.84	0.0E+00	AL03205.2	NT	Homo sapiens chromosome 21 segment HS21C038
2828	12757	22547	2.86	0.0E+00	AG0418.1	NT	Human transferrinase mRNA, complete cds
2833	12761	22551	43.46	0.0E+00	D50857.1	NT	Homo sapiens gamma-cytoplasmic actin (ACTG3) pseudogene
2833	12761	22552	43.46	0.0E+00	D50857.1	NT	Homo sapiens gamma-cytoplasmic actin (ACTG3) pseudogene
2837	12765	22558	1.34	0.0E+00	AL006857.1	NT	Novel human mRNA from chromosome 1, which has similarities to BAT2 genes
2838	12766		4.62	0.0E+00	Y10659.1	NT	H. sapiens mRNA for nuclear DNA helicase II
2839	12767		0.96	0.0E+00	AF132003.1	NT	Homo sapiens proto-oncogene alpha C1 (FOD1-alpha-C1) mRNA, complete cds
2840	12768	22556	25.08	0.0E+00	4503470	NT	Homo sapiens eukaryotic translation elongation factor 1 alpha 1 (EEF1A1) mRNA
2840	12768	22557	25.08	0.0E+00	4503470	NT	Homo sapiens eukaryotic translation elongation factor 1 alpha 1 (EEF1A1) mRNA
2851	12770	22568	2.42	0.0E+00	4507280	NT	Homo sapiens eukaryotic translation elongation factor 1 alpha 1 (EEF1A1) mRNA
2854	12782	22572	1.35	0.0E+00	AL041596.1	EST_HUMAN	Homo sapiens serine/threonine kinase 9 (STK9) mRNA
2855	12783	22573	1.25	0.0E+00	7691833	NT	DKFZP566G0027.1_1 556 (synonym: hui1) Homo sapiens cDNA clone DKFZP566G0027
2855	12783	22574	1.25	0.0E+00	7691833	NT	Homo sapiens KIAA0054 gene product; 1-ellasease (KIAA0054), mRNA
2856	12784		3.42	0.0E+00	4503038	NT	Homo sapiens KIAA0054 gene product; 1-ellasease (KIAA0054), mRNA
2856	12786	22575	4.95	0.0E+00	BE081905.1	EST_HUMAN	Homo sapiens chondroitin sulfate proteoglycan 1 (melanoma-associated) (CSPG4), mRNA
2858	12790	22577	4.95	0.0E+00	BE081905.1	EST_HUMAN	QV2-B170358-130400-138-H03 B170358 Homo sapiens cDNA
2858	12790	22577	4.95	0.0E+00	BE081905.1	EST_HUMAN	QV2-B170358-130400-138-H03 B170358 Homo sapiens cDNA
2858	12794	22588	1.64	0.0E+00	AL03205.2	NT	Homo sapiens chromosome 21 segment HS21C006

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2856	12764	22890	1.54	0.0E+00	AL163206.2	NT	Homo sapiens chromosome 21 segment HS210006 z95b17.1 s1 NCL CGAP CG81 Homo sapiens cDNA clone IMAGE593917 3' similar to contains Alu repetitive element
2857	12765	22890	1.08	0.0E+00	AA216570.1	EST_HUMAN	Homo sapiens HB5 gene for hair keratin, exon 1 to 9
2874	12801	22890	3.00	0.0E+00	Y10210.1	NT	Homo sapiens HB5 gene for hair keratin, exon 1 to 9
2877	12804	22890	1.16	0.0E+00	4789279	NT	Homo sapiens EphA4 (EPHA4) mRNA
2878	12805	22900	18.56	0.0E+00	4503470	NT	Homo sapiens eukaryotic translation elongation factor 1 alpha 1 (EEF1A1) mRNA
2879	12806	22891	1.26	0.0E+00	A1961002.1	EST_HUMAN	l161407.x1 NCL CGAP Emc25 Homo sapiens cDNA clone IMAGE2167881 3' similar to TR-O16247 O16247 F44E7.2 PROTEIN. ;
2879	12806	22891	1.26	0.0E+00	A1961002.1	EST_HUMAN	l161407.x1 NCL CGAP Emc25 Homo sapiens cDNA clone IMAGE2167881 3' similar to TR-O16247 O16247 F44E7.2 PROTEIN. ;
2881	12808	22892	1.25	0.0E+00	AF061022.1	EST_HUMAN	l161407.x1 NCL CGAP Emc25 Homo sapiens cDNA clone IMAGE2167881 3' similar to TR-O16247 O16247 F44E7.2 PROTEIN. ;
2881	12808	22892	1.87	0.0E+00	PC2740	SWISSPROT	ZINC FINGER PROTEIN 132
2882	12809	22893	1.5	0.0E+00	AF163338.1	NT	Homo sapiens proteasomal gamma C4 (PGH-gamma-C4) mRNA, complete cds
2897	12824	22817	1.34	0.0E+00	AE030038.1	NT	Homo sapiens mRNA for KIAA1297 protein, partial cds
2897	12824	22817	1.34	0.0E+00	AE030038.1	NT	Homo sapiens mRNA for KIAA1297 protein, partial cds
2898	12825	22810	4.98	0.0E+00	AF040411.1	NT	Homo sapiens mRNA for KIAA1509 protein, partial cds
2898	12825	22810	4.98	0.0E+00	AF040411.1	NT	Homo sapiens mRNA for KIAA1509 protein, partial cds
2901	12828	22823	2.66	0.0E+00	7691933	NT	Homo sapiens KIA00100 gene product (KIA00100), mRNA
2901	12828	22824	2.66	0.0E+00	7691933	NT	Homo sapiens KIA00100 gene product (KIA00100), mRNA
2902	12829	22825	3.23	0.0E+00	8174974	NT	Homo sapiens myeloid/lymphoid or mixed-lineage leukemia (t(11q23) (Drosophila) homolog), translocated to 4 (MLL1) mRNA
2902	12829	22825	3.23	0.0E+00	8174974	NT	Homo sapiens myeloid/lymphoid or mixed-lineage leukemia (t(11q23) (Drosophila) homolog), translocated to 4 (MLL1) mRNA
2907	12833	22890	1.27	0.0E+00	BF110702.1	EST_HUMAN	7h0003.x1 NCL CGAP Lu24 Homo sapiens cDNA clone IMAGE3567028 3' similar to TR-Q9VLN1 Q9VLN1 CG17293 PROTEIN. ;
2907	12833	22891	1.27	0.0E+00	BF110702.1	EST_HUMAN	7h0003.x1 NCL CGAP Lu24 Homo sapiens cDNA clone IMAGE3567028 3' similar to TR-Q9VLN1 Q9VLN1 CG17293 PROTEIN. ;
2916	12842	22842	2.03	0.0E+00	4605084	NT	Homo sapiens melanoma antigen, family B, 4 (MAGEB4), mRNA
2916	12842	22843	2.03	0.0E+00	4605084	NT	Homo sapiens melanoma antigen, family B, 4 (MAGEB4), mRNA
2917	12844	22845	0.94	0.0E+00	4855214	NT	Homo sapiens vrb-a avian erythroblastic leukemia viral oncogene homolog like 4 (ERBB4) mRNA
2917	12844	22845	0.94	0.0E+00	4855214	NT	Homo sapiens vrb-a avian erythroblastic leukemia viral oncogene homolog like 4 (ERBB4) mRNA
2924	12851	22851	1.6	0.0E+00	4738627	NT	Homo sapiens neurabin III (NRXN3) mRNA
2924	12851	22851	1.6	0.0E+00	X16309.1	NT	H. sapiens NF-H gene, exon 4
2927	12854	22855	1.3	0.0E+00	X16309.1	NT	H. sapiens NF-H gene, exon 4
2929	12856	22857	7.98	0.0E+00	AF106276.1	NT	Homo sapiens immunoglobulin-like transcript 1c variant 4 (ILT4) gene, exon 6



Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) HR BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3198	13069	22862	1.1	0.0E+00	BF243396.1	EST HUMAN	601876507.1 NH MG-63 Homo sapiens cDNA clone IMAGE:4107493 5'
3140	13065	22863	1.03	0.0E+00	AF098068.1	EST HUMAN	WU2107.1 NC1 CGAP 506 Homo sapiens cDNA clone IMAGE:2610803 3'
3146	13070	22870	3.99	0.0E+00	U95922.1	NT	H.sapiens mRNA for gamma-glutamyltransferase
3145	13070	22871	3.99	0.0E+00	U95922.1	NT	H.sapiens mRNA for gamma-glutamyltransferase
3150	13081	22883	3.15	0.0E+00	4798227	NT	Homo sapiens neuron III (NRXN3) mRNA
3150	13081	22884	1.5	0.0E+00	4798227	NT	Homo sapiens neuron III (NRXN3) mRNA
3163	13088	22892	7.73	0.0E+00	4504659	NT	Homo sapiens interleukin 1 receptor, type 1 (L1R1) mRNA
3164	13089	22893	3.20	0.0E+00	4507720	NT	Homo sapiens titin (TTN) mRNA
3164	13089	22894	3.20	0.0E+00	4507720	NT	Homo sapiens titin (TTN) mRNA
3180	13105	22910	2.44	0.0E+00	U29650.1	NT	Homo sapiens nucleolar phosphoprotein 823 (NPM1) mRNA, complete cds
3183	13106	22912	2.23	0.0E+00	4502028	NT	Homo sapiens solute carrier family 25 (mitochondrial carrier, adenine nucleotide translocator), member 5 (SLC25A5), nuclear gene encoding mitochondrial protein, mRNA
3188	13113	22918	0.82	0.0E+00	4798055	NT	Homo sapiens CREB binding protein (Rubiobin-1p3) cyclotome (CREBBP) mRNA
3188	13113	22918	0.82	0.0E+00	4798055	NT	Homo sapiens CREB binding protein (Rubiobin-1p3) cyclotome (CREBBP) mRNA
3190	13115	22920	20.3	0.0E+00	AA74783.1	EST HUMAN	aa976.1.1.1 Strathmore cortex brain S11 Homo sapiens cDNA clone IMAGE:871133 3'
3198	13123	22928	4.63	0.0E+00	AF369598.1	NT	Homo sapiens angiotensin binding protein 1 mRNA, complete cds
3198	13123	22928	4.63	0.0E+00	AF369598.1	NT	Homo sapiens angiotensin binding protein 1 mRNA, complete cds
3210	13134	22935	1.90	0.0E+00	4557560	NT	Homo sapiens fibrillin 1 (Miklen syndrome) (FBN1) mRNA
3215	13138	22942	3.35	0.0E+00	4507720	NT	Homo sapiens titin (TTN) mRNA
3224	13145	22947	4.30	0.0E+00	U95159.1	NT	Human cistein 43 processed pseudogene
3225	13146	22949	1.19	0.0E+00	AF104143.1	NT	Homo sapiens HLA class III region containing tetradin X (tetradin-X) gene, partial cds; cyclochrome P-450 2H4 hydroxylase (CYP2H4), complement component C2 (C2B) G11, helicase (SK2W), RD, complement factor B (BF), and complement component C2 (C2) gene, >
3227	13151	22951	4.15	0.0E+00	AF05094.1	NT	Homo sapiens very large G-protein coupled receptor-1 (VLGR1) mRNA, complete cds
3237	13069	22869	3.40	0.0E+00	4502014	NT	Homo sapiens A kinase (PKA) anchor protein 1 (AKAP1), mRNA
3237	13069	22869	3.40	0.0E+00	4502014	NT	Homo sapiens A kinase (PKA) anchor protein 1 (AKAP1), mRNA
3252	13175	22973	2	0.0E+00	AF250206.1	NT	Homo sapiens SWI-SNF complex protein p270 mRNA, partial cds
3253	13176	22974	0.80	0.0E+00	8023624	NT	Homo sapiens hypothetical protein FLJ20095 (FLJ20095), mRNA
3262	13203	23003	4.80	0.0E+00	AF59234.1	EST HUMAN	ts6108.x2 NC1 CGAP Part1 Homo sapiens cDNA clone IMAGE:222255 3' similar to SW-RL11, RAT
3269	13211	23011	2.96	0.0E+00	AF12893.1	NT	P25121 B05 RIBOSOMAL PROTEIN L11, contains Alu repetitive element;
3269	13211	23012	2.96	0.0E+00	AF12893.1	NT	Homo sapiens telomerase reverse transcriptase (TERT) gene, exons 1-5
3290	13212	23013	1	0.0E+00	7657213	NT	Homo sapiens telomerase reverse transcriptase (TERT) gene, exons 1-5
3290	13212	23013	1	0.0E+00	7657213	NT	Homo sapiens telomerase reverse transcriptase (TERT) gene, exons 1-5
3290	13212	23014	1	0.0E+00	7657213	NT	Homo sapiens telomerase reverse transcriptase (TERT) gene, exons 1-5
3290	13212	23014	1	0.0E+00	7657213	NT	Homo sapiens telomerase reverse transcriptase (TERT) gene, exons 1-5

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3292	13214	23016	1.01	0.0E+00	4602582	NT	Homo sapiens caspase 8, apoptosis-related cysteine protease (CASP8) mRNA
3292	13214	23016	1.01	0.0E+00	4602582	NT	Homo sapiens caspase 8, apoptosis-related cysteine protease (CASP8) mRNA
3296	13218	23019	11.07	0.0E+00	AF111103.1	NT	Homo sapiens p191 (MEFV) gene, complete cds
3298	13220	23021	0.96	0.0E+00	AB040400.1	NT	Homo sapiens mRNA for KIA1507 protein, partial cds
3303	13224	23026	0.99	0.0E+00	BE770039.1	EST_HUMAN	601464689F1 NIH_MGC_07 Homo sapiens cDNA clone IMAGE3685246 5'
3350	13270	23073	3.01	0.0E+00	AU125604.1	EST_HUMAN	AU123864 NT2M2 Homo sapiens cDNA clone NT2M200798 5'
3357	13276	23076	1.66	0.0E+00	7983439	NT	Homo sapiens octadecanoyl receptor, family 10, subfamily C, member 1 (OR10C1), mRNA
3357	13276	23077	1.66	0.0E+00	7983439	NT	Homo sapiens octadecanoyl receptor, family 10, subfamily C, member 1 (OR10C1), mRNA
3360	13276	23077	1.66	0.0E+00	7983439	NT	Homo sapiens octadecanoyl receptor, family 10, subfamily C, member 1 (OR10C1), mRNA
3360	13276	23079	1.43	0.0E+00	7706230	NT	Homo sapiens neurotrophin-3-induced protein LOC515941, mRNA
3361	13280	23080	0.99	0.0E+00	AF211180.1	NT	Homo sapiens T-type calcium channel subunit Alpha1A1 isoform (CACNA1A) mRNA, complete cds
3377	13265	23064	1.35	0.0E+00	7662401	NT	Homo sapiens KIAA0652 protein (KIAA0652), mRNA
3377	13265	23065	1.35	0.0E+00	7662401	NT	Homo sapiens KIAA0652 protein (KIAA0652), mRNA
3378	13265	23065	0.96	0.0E+00	4802328	NT	Homo sapiens desmin filament structural protein 1, flnln1 (BFSPI) mRNA
3381	13269	23068	1.71	0.0E+00	5803067	NT	Homo sapiens leukocyte immunoglobulin-like receptor, subfamily A (with TM domain), member 2 (LILRA2), mRNA
3380	13265	22455	6.04	0.0E+00	AF10763.1	NT	Homo sapiens skeletal muscle LIM protein 1 (FHL1) gene, complete cds
3385	13312	23111	2.08	0.0E+00	U757008	NT	Homo sapiens death receptor 6 (DR6), mRNA
3385	13316	23115	1.83	0.0E+00	AJ277215.1	NT	Homo sapiens mRNA for rapa-2 (rapa gene)
3388	13315	23116	1.83	0.0E+00	AJ277215.1	NT	Homo sapiens mRNA for rapa-2 (rapa gene)
3400	13317	23118	5.53	0.0E+00	K02860.1	NT	Escherichia coli replication region including repA, parA, and parB genes and hsdA, hsdB, and hsdC incompatibility determinants
3402	13310	23120	1.21	0.0E+00	7427622	NT	Homo sapiens protein tyrosine phosphatase, receptor type, 1 (PTPRT), mRNA
3409	13320	23126	3.68	0.0E+00	AB95159.1	EST_HUMAN	NEURAL CELL ADHESION MOLECULE ;
3409	13326	23127	3.68	0.0E+00	AB95159.1	EST_HUMAN	NEURAL CELL ADHESION MOLECULE ;
3413	13330	23132	2.67	0.0E+00	AJ278120.1	NT	Homo sapiens mRNA for putative ankyrin-rep1 containing protein (ORP1)
3420	13337	23141	2.86	0.0E+00	9562332	NT	Homo sapiens v-fos FBJ murine osteosarcoma viral oncogene homolog (FOS), mRNA
3420	13337	23142	2.86	0.0E+00	9562332	NT	Homo sapiens v-fos FBJ murine osteosarcoma viral oncogene homolog (FOS), mRNA
3426	13343	23146	1.14	0.0E+00	M4123.1	NT	Human endogenous retrovirus HERV-K (10)
3431	13348	23150	6.18	0.0E+00	U43203.1	NT	Human MDS1A (AML1/MDST fusion) mRNA, partial cds
3436	13353	23157	1.01	0.0E+00	9558718	NT	Homo sapiens hypothetical protein (AF038169), mRNA
3436	13353	23157	1.01	0.0E+00	9558718	NT	Homo sapiens hypothetical protein (AF038169), mRNA
3436	13353	23157	1.01	0.0E+00	9558718	NT	Homo sapiens hypothetical protein (AF038169), mRNA

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) HR BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Description
3440	13357	23163	2.06	0.0E+00	AF045462.1	NT	Homo sapiens cell-line K512 transcriptional regulatory protein p54 mRNA, complete cds
3440	13357	23164	2.06	0.0E+00	AF045462.1	NT	Homo sapiens cell-line K512 transcriptional regulatory protein p54 mRNA, complete cds
3448	13365	23172	1.28	0.0E+00	AF231622.1	NT	Homo sapiens chromosome 21 unknown mRNA
3455	13371	23175	0.94	0.0E+00	AA026977.1	EST_HUMAN	ab51112.1 Stratagene lung carcinoma 937218 Homo sapiens cDNA clone IMAGE:844367 5'
3455	13371	23176	0.94	0.0E+00	AA026977.1	EST_HUMAN	ab51112.1 Stratagene lung carcinoma 937218 Homo sapiens cDNA clone IMAGE:844367 5'
3455	13371	23177	0.94	0.0E+00	AA026977.1	EST_HUMAN	ab51112.1 Stratagene lung carcinoma 937218 Homo sapiens cDNA clone IMAGE:844367 5'
3459	13374	23180	1.11	0.0E+00	4508028	NT	Homo sapiens zinc finger protein 42 (a Kruppel-associated box (KRAB) domain polypeptide) (ZNF42) mRNA
3461	13377	23182	2.23	0.0E+00	BE304791.1	EST_HUMAN	601143953.F1 NIH_MGC_15 Homo sapiens cDNA clone IMAGE:3051373 5'
3461	13377	23183	2.23	0.0E+00	BE304791.1	EST_HUMAN	601143953.F1 NIH_MGC_15 Homo sapiens cDNA clone IMAGE:3051373 5'
3463	13376	23183	1.43	0.0E+00	4820706	NT	Homo sapiens potassium voltage-gated channel, Isk-related family, member 2 (KCNK2) mRNA
3470	13366	23191	0.82	0.0E+00	U3394007.1	EST_HUMAN	h35012.x1 Soares_NHHPV_S1 Homo sapiens cDNA clone IMAGE:2088742 3' similar to TR-000468
3473	13369	23194	0.96	0.0E+00	M10976.1	NT	Homo endogenous retroviral DNA (A-C), complete retroviral segment
3465	13412	23217	0.82	0.0E+00	4506834	NT	Homo sapiens serine/threonine protein kinase II (SEK2) mRNA
3467	13414	23217	1.3	0.0E+00	AF578668.1	NT	Homo sapiens homologous yeast-L2 protein mRNA, complete cds
3505	13422	23225	1.36	0.0E+00	AL133204.1	NT	Novel human gene mapping to chromosome X
3507	13423	23228	0.96	0.0E+00	AB040608.1	NT	Homo sapiens mRNA for KIAA1740 protein, partial cds
3527	13443		0.88	0.0E+00	AB019807.1	EST_HUMAN	027761.x1 Soares_NHHPV_S1 Homo sapiens cDNA clone IMAGE:1662366 3' similar to WP:11684.4
3529	13446	23242	1.26	0.0E+00	6325403	NT	Homo sapiens butyrophilin, subfamily 3, member A2 (BTN3A3) mRNA
3533	13448		4.53	0.0E+00	AW852277.1	EST_HUMAN	QV0-C10225-230300-166-001 C10225 Homo sapiens cDNA
3540	13456		0.86	0.0E+00	AF116946.1	NT	Homo sapiens gamma-glutamylcysteine synthetase (GLO1) gene, partial cds
3541	13457	23250	7.43	0.0E+00	BF076933.1	EST_HUMAN	002084583.F1 NIH_MGC_03 Homo sapiens cDNA clone IMAGE:4248566 5'
3564	13478		1.11	0.0E+00	4820697	NT	Homo sapiens retinoblastoma-binding protein 2 (RBBP2) mRNA
3566	13480	23266	0.86	0.0E+00	AW061603.1	EST_HUMAN	H84501.x1 Soares_NHHPV_S1 Homo sapiens cDNA clone IMAGE:2976024 3'
3569	13480	23270	0.86	0.0E+00	AW061603.1	EST_HUMAN	H84501.x1 Soares_NHHPV_S1 Homo sapiens cDNA clone IMAGE:2976024 3'
3569	13483	23274	1.13	0.0E+00	4826703	NT	Homo sapiens heparan sulfate (glucosamine) 3-O-sulfotransferase 1 (HS3ST1) mRNA
3571	13486	23277	0.76	0.0E+00	7662319	NT	Homo sapiens KIAA0866 gene product (KIAA0866), mRNA
3578	13462	23282	0.79	0.0E+00	4557752	NT	Homo sapiens midline 1 (Opitz/BBB syndrome) (MID1) mRNA
3578	13462	23283	0.79	0.0E+00	4557752	NT	Homo sapiens midline 1 (Opitz/BBB syndrome) (MID1) mRNA
3590	13510	23297	1.51	0.0E+00	287327.1	NT	Homo sapiens mRNA for G protein-coupled inward rectifier potassium channel, complete cds
3590	13514		28.67	0.0E+00	7669491	NT	Homo sapiens glyceraldehyde-3-phosphate dehydrogenase (GAPD), mRNA
3591	13550	23316	4.26	0.0E+00	AB020542.1	NT	Homo sapiens WAVE2 mRNA for WASP-family protein, complete cds

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top Hit) ELAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3619	13533	23318	3.26	0.0E+00	AF12450.1	NT	Homo sapiens SH2-containing protein Nsp2 mRNA, complete cds
3619	13533	23319	3.26	0.0E+00	AF12450.1	NT	Homo sapiens SH2-containing protein Nsp2 mRNA, complete cds
3623	13537	23323	1.5	0.0E+00	AA682743.1	EST_HUMAN	NHTECae150691 Normal Human Trabecular Bone Cells Homo sapiens cDNA clone NHTECae1509
3623	13537	23324	1.5	0.0E+00	AA682743.1	EST_HUMAN	NHTECae150691 Normal Human Trabecular Bone Cells Homo sapiens cDNA clone NHTECae1509
3626	13540	23326	2.2	0.0E+00	AL163204.2	NT	Homo sapiens chromosome 21 segment HS21C004
3628	13540	23327	2.2	0.0E+00	AL163204.2	NT	Homo sapiens chromosome 21 segment HS21C004
3630	13544	23331	1.70	0.0E+00	U729228	NT	Homo sapiens matrix metalloproteinase 24 (membrane-inserted) (MMP24), mRNA
3632	13546	23333	1.35	0.0E+00	AB048339.1	NT	Homo sapiens mRNA for KIAA0766 protein, partial cds
3646	13559	23344	3.83	0.0E+00	AY28134.1	EST_HUMAN	UHL-BWO-aipe-124-01-J1 NCI CGAP Sub6 Homo sapiens cDNA clone IMAGE:2733022 3'
3646	13559	23345	3.33	0.0E+00	AY28134.1	EST_HUMAN	UHL-BWO-aipe-124-01-J1 NCI CGAP Sub6 Homo sapiens cDNA clone IMAGE:2733022 3'
3688	13582	23366	0.99	0.0E+00	AB040430.1	NT	Human gene for Type IX collagen $\alpha 1$ chain, exon 8
3689	13583	23370	1.03	0.0E+00	AA469356.1	EST_HUMAN	sadog1711 Sheep P24H45 KEA/TN, HIGH-SULFUR MATRIX PROTEIN, IIB, [1]
3677	13591	23377	3.35	0.0E+00	7657408	NT	Homo sapiens similar to rat integral membrane glycoprotein POM121 (POM121L1), mRNA
3687	13600	23387	0.91	0.0E+00	AR037635.1	NT	Homo sapiens mRNA for UAA1114 protein, partial cds
3689	13611	23397	3.88	0.0E+00	7682183	NT	Homo sapiens ribosomal protein S2 (RP-S2) mRNA
3701	13615	23399	7.88	0.0E+00	4506718	NT	Homo sapiens v-ets avian erythroblastosis virus E26 oncogene related (ERG), mRNA
3705	13618	23401	1.02	0.0E+00	7657095	NT	Homo sapiens v-ets avian erythroblastosis virus E26 oncogene related (ERG), mRNA
3746	13659	23402	1.02	0.0E+00	7657095	NT	Homo sapiens soluble neuropilin-1 mRNA, complete cds
3747	13660	23441	1.13	0.0E+00	AF45712.1	NT	Homo sapiens DNA interstrand repair protein (MLH3) gene, complete cds
3748	13661	23442	1.01	0.0E+00	AF176733.1	NT	Penicillin-binding affinity receptor (PBR208) gene, partial cds
3751	13664	23446	2.3	0.0E+00	7657488	NT	Homo sapiens similar to rat integral membrane glycoprotein POM121 (POM121L1), mRNA
3751	13664	23447	1.69	0.0E+00	7657488	NT	Homo sapiens similar to rat integral membrane glycoprotein POM121 (POM121L1), mRNA
3752	13666	23448	1.45	0.0E+00	AF420091.1	NT	Homo sapiens smooth muscle myosin heavy chain SM1 mRNA, alternatively spliced, partial cds
3756	13669	23453	1.45	0.0E+00	10181139	NT	Mus musculus junctophilin 1 (Jup), pending, mRNA
3759	13671	23455	1.7	0.0E+00	A377699.1	EST_HUMAN	test2101.ct Source: NHL_T_CBC S1 Homo sapiens cDNA clone IMAGE:2061307 3'
3759	13672	23455	1.7	0.0E+00	AF123468.1	EST	Homo sapiens prolactinrh beta 3 (PDLH-beta3) mRNA, complete cds
3760	13673	23456	4.48	0.0E+00	-4758109	NT	Homo sapiens diastolein (DPI, DPIL) (DSP) mRNA
3763	13676	23458	11.67	0.0E+00	5783685.1	NT	Homo sapiens ATP-sensitive inwardly rectifying K-channel subunit (KCNJ6B1R1) gene, complete cds
3764	13677	23459	2	0.0E+00	7710146	NT	Homo sapiens methyl CpG binding protein 2 (MECP2), mRNA



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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Description
3765	137676	23460	2.39	0.0E+00	7662183	NT	Homo sapiens KIAA0689 gene product (KIAA0689), mRNA
3766	136871	23462	1.31	0.0E+00	AF096901.2	NT	Homo sapiens myosin light chain kinase isoform 2 (MLCK) mRNA, complete cds
3766	136871	23463	1.31	0.0E+00	AF096901.2	NT	Homo sapiens myosin light chain kinase isoform 2 (MLCK) mRNA, complete cds
3766	136882	23464	1.97	0.0E+00	4504534	NT	Homo sapiens 5-hydroxytryptamine (serotonin) receptor 1D (HTR1D) mRNA
3773	136955	23467	1.61	0.0E+00	AL63276.2	NT	Homo sapiens chromosome 21 segment HS2/C079
3775	13687	23470	1.12	0.0E+00	6912735	NT	Homo sapiens transient receptor potential channel 3 (TRPC3), mRNA
3780	13692	23478	6.97	0.0E+00	4503178	NT	Homo sapiens chromosome X open reading frame 5 (CXORF5) mRNA
3780	13692	23479	5.97	0.0E+00	4503178	NT	Homo sapiens chromosome X open reading frame 5 (CXORF5) mRNA
3782	13694	23482	3.95	0.0E+00	U09412.1	NT	Human zinc finger protein ZNF134 mRNA, complete cds
3784	13696	23483	1.63	0.0E+00	4626763	NT	Homo sapiens potassium voltage-gated channel, Shab-related subfamily, member 1 (KCNA1) mRNA
3787	13699	23486	0.96	0.0E+00	AF012615.1	NT	Homo sapiens familial mental retardation protein 2 (FMR2) gene, exon 11
3788	13700	23487	1.87	0.0E+00	475917.1	NT	Homo sapiens S235-interacting protein 1 (SERP129), mRNA
3789	13702	23489	0.82	0.0E+00	AF099117.1	NT	Homo sapiens aspartylglycyl aminotransferase, partial cds
3799	13711	23498	2.54	0.0E+00	AB84727.1	EST_HUMAN	AK01071.1 NC_004393.2 Homo sapiens cDNA clone IMAGE2411085 5' similar to TR048340
3802	13714	23502	6.08	0.0E+00	4606742	NT	Q43940 R08850_2, contains element P1RY repetitive element; Homo sapiens ribosomal protein S8 (RPS8), mRNA
3807	13719	23506	1.41	0.0E+00	AL046336.1	EST_HUMAN	DKFZP434N0413.1 434 (tyrosinase, tyrosinase) Homo sapiens cDNA clone DKFZP434N0413 5'
3813	13725	23515	1	0.0E+00	6005687	NT	Homo sapiens APT1 gamma subunit binding protein 1 (AP1GBP1), mRNA
3815	13727	23516	2.45	0.0E+00	6005687	NT	Homo sapiens APT1 gamma subunit binding protein 1 (AP1GBP1), mRNA
3816	13728	23518	1.8	0.0E+00	4504138	NT	Homo sapiens glutamate receptor, metabotropic 3 (GRM3) mRNA
3820	13732	23521	0.87	0.0E+00	AF14912.1	NT	Homo sapiens HBP17 heparin-binding and FGF-binding protein gene, complete cds
3830	13742	23534	1.27	0.0E+00	4500758	NT	Homo sapiens tyrosine receptor 3 (RYR3) mRNA
3833	13751	23537	1.62	0.0E+00	469542	EST	Homo sapiens zinc finger protein (KIAA0412) mRNA
3840	13751	23544	1.76	0.0E+00	BF395206.1	EST_HUMAN	RC3-H17090-170900-011-nt170960 Homo sapiens cDNA
3842	13763	23546	1.4	0.0E+00	AW688221.1	EST_HUMAN	MAK945 Human matrix tissue expression library: Homo sapiens cDNA clone Inocyte 1964728 similar to MAK945
3842	13763	23546	1.4	0.0E+00	AW688221.1	EST_HUMAN	MAK945 Human matrix tissue expression library: Homo sapiens cDNA clone Inocyte 1964728 similar to MAK945
3848	13769	23552	1.78	0.0E+00	AF126533.1	NT	MAK945 Human matrix tissue expression library: Homo sapiens cDNA clone Inocyte 1964728 similar to MAK945
3853	13764	23557	3.2	0.0E+00	HE37602.1	EST_HUMAN	651265665F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE306800 5'
3854	13765	23556	1.97	0.0E+00	BE343146.1	EST_HUMAN	651153127F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE309745 5'
3859	13771	23563	0.27	0.0E+00	AW590740.1	EST_HUMAN	PA34-L10051-100100-003-b09 L10051 Homo sapiens cDNA

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3893	13803	23587	4.6	0.0E+00	AF16195.1	NT	Homo sapiens cancer-testis antigen CT10 (CT10) gene, complete cds
3893	13803	23586	4.6	0.0E+00	AF16195.1	NT	Homo sapiens cancer-testis antigen CT10 (CT10) gene, complete cds
3903	13813	23586	3.83	0.0E+00	U23910.1	NT	Human MHC class II lymphocyte antigen DPA4-beta-2 pseudogene, exon 2
3905	13815	23586	5.44	0.0E+00	AL163303.2	NT	Homo sapiens chromosome 21 segment HS21C103
3912	13822	23603	1.53	0.0E+00	AL118494.1	NT	Novel human gene mapping to chromosome 20
3916	13825	23605	2.89	0.0E+00	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
3924	13833	23613	1.46	0.0E+00	AL163285.2	NT	Homo sapiens chromosome 21 segment HS21C085
3935	13844	23613	25.75	0.0E+00	4503470	NT	Homo sapiens eukaryotic translation elongation factor 1 alpha 1 (EEF1A1) mRNA
3935	13844	23623	1.16	0.0E+00	7662183	NT	Homo sapiens KIA0569 gene product (KIA0569) mRNA
3940	13848	23624	2.05	0.0E+00	U09369.1	NT	Human zinc finger protein ZNF153
3940	13848	23645	6.24	0.0E+00	AB015910.1	NT	Chlorococcus sulfoburgenensis RNA for ribosomal protein S4X, complete cds
3958	13875	23658	3.79	0.0E+00	U23937.1	NT	Homo sapiens mRNA for UCR suppressor RNA-associated antigenic protein (RNU46 gene)
3976	13893	23658	3.28	0.0E+00	A277776.1	NT	Homo sapiens mRNA for nipa-2 (nipa gene)
3976	13893	23656	3.28	0.0E+00	A277776.1	NT	Homo sapiens mRNA for nipa-2 (nipa gene)
3981	13898	23663	5.63	0.0E+00	5932028	NT	Homo sapiens retinoblastoma-binding protein 4 (RBSP4) mRNA
3981	13898	23664	5.63	0.0E+00	5932028	NT	Homo sapiens retinoblastoma-binding protein 4 (RBSP4) mRNA
3983	13900	23677	0.81	0.0E+00	4503914	NT	Homo sapiens phosphoribosylpyrimidine formyltransferase, phosphoribosylglycinamide synthetase, phosphoribosylanthranilate synthetase (GART) mRNA
4000	13908	23682	4.89	0.0E+00	4885306	NT	Homo sapiens G protein-coupled receptor 21 (GPR21) mRNA
4001	13907	23683	1.94	0.0E+00	AB006035.1	NT	Homo sapiens mRNA for KIA0287 gene, partial cds
4003	13909	23684	1.28	0.0E+00	4758807	NT	Homo sapiens mRNA for KIA0287 gene, partial cds
4004	13910	23686	8.1	0.0E+00	11419297	NT	Homo sapiens rna GTPase activating protein-like (NGAP) mRNA
4005	13911	23686	1.86	0.0E+00	AL090897.1	NT	Novel human mRNA from chromosome 1, which has similarities to BA12 genes
4013	13919	23686	2.7	0.0E+00	AF157476.1	NT	Homo sapiens DNA polymerase zeta catalytic subunit (REV3) mRNA, complete cds
4017	13971	23687	0.85	0.0E+00	4529417	NT	Homo sapiens protein kinase, X-linked (PRKX) mRNA
4022	11031	23672	0.8	0.0E+00	4529417	NT	Homo sapiens protein kinase, X-linked (PRKX) mRNA
4028	11031	23673	0.8	0.0E+00	5801805	NT	Homo sapiens protein kinase, X-linked (PRKX) mRNA
4028	13931	23707	0.99	0.0E+00	4503844	NT	Homo sapiens protein kinase, X-linked (PRKX) mRNA
4029	13932	23709	1.16	0.0E+00	4503844	NT	Homo sapiens protein kinase, X-linked (PRKX) mRNA
4032	13932	23709	1.16	0.0E+00	4503844	NT	Homo sapiens protein kinase, X-linked (PRKX) mRNA
4032	13935	23711	1.05	0.0E+00	4503844	NT	Homo sapiens protein kinase, X-linked (PRKX) mRNA
4032	13935	23711	1.05	0.0E+00	4503844	NT	Homo sapiens protein kinase, X-linked (PRKX) mRNA
4041	13944	23722	4.89	0.0E+00	AB02597.1	EST_HUMAN	W04404.1 (NCI) CGAP CGH Homo sapiens cDNA clone IMAGE251675.5
4041	13944	23723	4.89	0.0E+00	AB02597.1	EST_HUMAN	W04404.1 (NCI) CGAP CGH Homo sapiens cDNA clone IMAGE251675.5

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Best Similar BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4044	13946	23725	0.88	0.0E+00	BE184959.1	EST_HUMAN	MR1-HT0707-100500-001-a02 HT0707 Homo sapiens cDNA
4044	13946	23725	0.88	0.0E+00	BE184959.1	EST_HUMAN	MR1-HT0707-100500-001-a02 HT0707 Homo sapiens cDNA
4044	13946	23725	0.88	0.0E+00	BE184959.1	EST_HUMAN	MR1-HT0707-100500-001-a02 HT0707 Homo sapiens cDNA
4048	13950	23725	1.99	0.0E+00	BE27427.1	EST_HUMAN	601120778.F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:2967890.5'
4055	13957	23733	0.97	0.0E+00	4507479	NT	Homo sapiens transglutaminase 3 (E polypeptide, protein-glutamine-gamma-glutamyltransferase) (TGMS3) mRNA
4056	13959	23734	1.95	0.0E+00	5752725	NT	Homo sapiens nuclear receptor coactivator 3 (NCOA3) mRNA
4064	13966	23748	6.19	0.0E+00	AW675599.1	EST_HUMAN	ba5f104.x1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:2900095.3' similar to SW-TH12_BOVIN
4066	13971	23748	1.52	0.0E+00	AW403788.1	EST_HUMAN	U1HF-BMO-adv-c2-c411.1 NIH_MGC_38 Homo sapiens cDNA clone IMAGE:30383147.5'
4071	13973	23761	1.33	0.0E+00	8922495	NT	Homo sapiens hypothetical protein FLJ10468 (FLJ10468) mRNA
4071	13973	23762	1.33	0.0E+00	8922495	NT	Homo sapiens hypothetical protein FLJ10468 (FLJ10468) mRNA
4081	13983	23776	1.95	0.0E+00	5174632	NT	Homo sapiens hypothetical protein FLJ10468 (FLJ10468) mRNA
4086	13998	23776	7.82	0.0E+00	AA401438.1	EST_HUMAN	z65807.at Soares_Jarvis_NHT Homo sapiens cDNA clone IMAGE:743197.3' similar to contains AU repetitive element contains element MER35 repetitive element;
4098	14008	23776	7.82	0.0E+00	AA401438.1	EST_HUMAN	z65807.at Soares_Jarvis_NHT Homo sapiens cDNA clone IMAGE:743197.3' similar to contains AU repetitive element contains element MER35 repetitive element;
4113	14013	23781	3.79	0.0E+00	4507720	NT	Homo sapiens tRNA (TIN) mRNA
4126	14028	23801	0.97	0.0E+00	4506882	NT	Homo sapiens aminoglycoside phosphotransferase (ISENG) mRNA
4130	14030	23804	8.21	0.0E+00	4758199	NT	Homo sapiens desmoplakin (DPL, DPL1) [D5P] mRNA
4137	14037	23837	0.98	0.0E+00	AL163003.2	NT	Homo sapiens chromosome 21 segment H521C108
4163	14093	23857	1.13	0.0E+00	AJ003146.1	NT	Homo sapiens mRNA for effector receptor protein, pseudogene
4176	14079	23851	7.84	0.0E+00	020310.1	NT	Human lipoprotein B-100 mRNA, complete cds
4180	14090	23868	0.95	0.0E+00	AW690989.1	EST_HUMAN	FM2-DT0023-080300-004-a08 DT0023 Homo sapiens cDNA
4180	14090	23876	0.88	0.0E+00	4829827	NT	Homo sapiens myofibrillar syndrome 1 (MDS1) mRNA
4186	14096	23877	0.86	0.0E+00	4829827	NT	Homo sapiens myofibrillar syndrome 1 (MDS1) mRNA
4198	14098	23879	5.73	0.0E+00	AF174590.1	NT	Homo sapiens F-box protein FBL4 (FBL4) mRNA, partial cds
4205	14105	23901	1.92	0.0E+00	M189544.1	EST_HUMAN	q23106.x1 Soares_placenta_Bldgweeks_2N6-HP649W Homo sapiens cDNA clone IMAGE:1724579.3' similar to contains MER20L2 MER20 repetitive element;
4210	14109	23907	4.09	0.0E+00	U14520.1	NT	Human CBFA3 (CBFA3) gene, partial cds
4224	14122	23987	0.95	0.0E+00	45056416	NT	Homo sapiens propeptide convertase subtilisin/kexin type 2 (PCSK2) mRNA
4230	14128	23984	0.97	0.0E+00	6553354	NT	Homo sapiens protein kinase C, alpha (PRKCA) mRNA

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) HIT BLAST E Value	Top HIT Accession No.	Top HIT Database Source	Top HIT Descriptor
4230	14126	23805	0.87	0.0E+00	6663394	NT	Homo sapiens protein kinase C, $\alpha$ (PRKCA), mRNA
4237	14135	23811	1.17	0.0E+00	U10391.1	NT	Human G2 protein mRNA, partial cds
4237	14135	23812	1.17	0.0E+00	U10391.1	NT	Human G2 protein mRNA, partial cds
4245	14144	23917	10.2	0.0E+00	6912281	NT	Homo sapiens COMPLEMENT COMPONENT C1q RECEPTOR (C1QA), mRNA
4243	14162	23917	1.15	0.0E+00	AF153047.2	NT	Homo sapiens gap junction protein connexin-36 (CX36) gene, complete cds
4256	14167	23943	1.56	0.0E+00	U03501.1	NT	Human Ig light chain VL1 region gamma (hum1g2c) gene, partial cds
4274	14173	23950	5.17	0.0E+00	L14591.1	NT	Homo sapiens plasma membrane calcium ATPase isoform 1 (ATP2B1) gene, alternative splice products, partial cds
4278	14177	23955	2.76	0.0E+00	Z60760.1	NT	H. sapiens H2b/h gene
4278	14177	23956	2.76	0.0E+00	Z60760.1	NT	H. sapiens H2b/h gene
4284	14183	23962	1.56	0.0E+00	X60463.1	NT	H. sapiens H4d gene for H4 histone
4284	14183	23963	1.56	0.0E+00	X60463.1	NT	H. sapiens H4d gene for H4 histone
4286	14187	23969	8.06	0.0E+00	7692091	NT	Homo sapiens KIA0350 gene product (KIA0350), mRNA
4289	14187	23970	8.06	0.0E+00	7692091	NT	Homo sapiens KIA0350 gene product (KIA0350), mRNA
4290	14187	23970	8.06	0.0E+00	7692091	NT	Homo sapiens KIA0350 gene product (KIA0350), mRNA
4290	14187	23970	8.06	0.0E+00	7692091	NT	Homo sapiens KIA0350 gene product (KIA0350), mRNA
4292	14200	23984	0.88	0.0E+00	J502776.1	NT	Homo sapiens caudal type homeo box transcription factor 4 (CDX4), mRNA
4333	14203	24072	1.11	0.0E+00	7016456	NT	Homo sapiens myosin regulatory light chain interacting protein (MIR), mRNA
4341	14205	24072	5.56	0.0E+00	AF159553.1	NT	Homo sapiens membrane-bound aminopeptidase F (XCP-PEP2) gene, complete cds
4348	14263	24028	8.1	0.0E+00	AJ249765.1	NT	Homo sapiens ACT12 gene for alpha-Actinin 2, exon 10
4348	14263	24028	8.1	0.0E+00	AJ249765.1	NT	Homo sapiens ACT12 gene for alpha-Actinin 2, exon 10
4368	14264	24028	1.92	0.0E+00	AF200629.1	NT	Homo sapiens HPS1 gene, intron 5
4401	14295	24060	40.23	0.0E+00	AW084904.1	EST, HUMAN	xc696d8.x1 NC1 CGAP Exon2 Homo sapiens cDNA clone IMAGE2589448 3' similar to SW/ANK_HUMAN
4403	14303	24060	1.91	0.0E+00	8051619	NT	CD0696 NEUROBLAST DIFFERENTIATION ASSOCIATED PROTEIN AHNAK ;
4403	14303	24060	1.91	0.0E+00	8051619	NT	CD0696 NEUROBLAST DIFFERENTIATION ASSOCIATED PROTEIN AHNAK ;
4405	14266	24083	1.38	0.0E+00	AF16050.1	NT	Homo sapiens vascular endothelial cell growth factor 185 receptor/neuropilin (VEGF-185) mRNA, complete cds
4408	14302	24087	1.29	0.0E+00	AL103207.2	EST, HUMAN	PM1-HT1005-101198-002-003 HT10809 Homo sapiens cDNA
4410	14304	24087	1.29	0.0E+00	AW381570.1	NT	PM1-HT1005-101198-002-003 HT10809 Homo sapiens cDNA
4416	14310	24064	1.83	0.0E+00	AJ2776120.1	NT	Homo sapiens mRNA for putative ankyrin-repeat containing protein (ORF1)
4416	14310	24065	1.83	0.0E+00	AJ2776120.1	NT	Homo sapiens mRNA for putative ankyrin-repeat containing protein (ORF1)
4418	14312	24097	3.91	0.0E+00	4758467	NT	Homo sapiens G-protein-coupled receptor 50 (GPR50) mRNA
4419	14313	24099	2.3	0.0E+00	AF108930.1	NT	Homo sapiens aspartate aminotransferase protein kinase (ANSH) mRNA, complete cds
4424	14316	24104	1.47	0.0E+00	Z66526.1	NT	H. sapiens pancreatic polypeptide receptor PP1 gene
4429	14324	24111	1.12	0.0E+00	Z76984.1	NT	Homo sapiens ATP-sensitive inwardly rectifying K-channel subunit (KCNJ5/IR1) gene, exon

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) HR BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4430	14326	24112	1.95	0.0E+00	AF111063.1	NT	Homo sapiens p4m (MERV) gene, complete cds
4430	14325	24113	1.95	0.0E+00	AF111063.1	NT	Homo sapiens p4m (MERV) gene, complete cds
4439	14325	24123	3.08	0.0E+00	6008973	NT	Homo sapiens zinc finger protein 195 (ZNF195) mRNA
4441	14338	24128	5.37	0.0E+00	AF208161.1	NT	Homo sapiens synovial precursor, mRNA, complete cds
4441	14343	24135	1.92	0.0E+00	AF152337.1	NT	Homo sapiens protoderm gamma C3 (FODH-gamma-C3) mRNA, complete cds
4452	14346	24139	1.96	0.0E+00	5454175	NT	Homo sapiens zinc finger protein 211 (ZNF211) mRNA
4462	14356	24147	15.15	0.0E+00	4503470	NT	Homo sapiens eukaryotic translation elongation factor 1 alpha 1 (EEF1A1) mRNA
4473	14377	24150	1.47	0.0E+00	4503058	NT	Homo sapiens chondroitin sulfate proteoglycan 4 (melanoma-associated) (CSFQA) mRNA
4477	14371	24161	1.98	0.0E+00	4502556	NT	Homo sapiens calcium/calmodulin-dependent protein kinase IV (CAMK4) mRNA
4481	14376	24163	2.78	0.0E+00	134885.1	NT	Homo sapiens furanolate sulphate sulphonase (IOS) gene, complete cds
4483	14377	24163	9.78	0.0E+00	7692091	NT	Homo sapiens KIAA0390 gene product (KIAA0390) mRNA
4483	14377	24164	9.78	0.0E+00	7692091	NT	Homo sapiens KIAA0390 gene product (KIAA0390) mRNA
4488	14392	24177	2.04	0.0E+00	AF143314.1	NT	Homo sapiens PTEN (PTEN) gene, exons 3 through 5
4500	14394	24179	8.87	0.0E+00	AL245418.1	NT	Homo sapiens mRNA for G7c protein (G7c gene located in the class II region of the major histocompatibility complex)
4500	14394	24180	8.87	0.0E+00	AL245418.1	NT	Homo sapiens mRNA for G7c protein (G7c gene located in the class II region of the major histocompatibility complex)
4511	14404		0.84	0.0E+00	D87876.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
4523	14418		1.55	0.0E+00	BA174072.1	EST_HUMAN	219582 at Staphylococcus aureus 337222 Homo sapiens cDNA clone IMAGE50954 3'
4528	14421		1.22	0.0E+00	7957410	NT	Homo sapiens chromosome 21 segment HS21C084
4529	14422	24206	1.71	0.0E+00	AF164110.1	NT	Homo sapiens cyclodextrin-related protein (NKT1) gene, complete cds
4530	14423	24206	4.37	0.0E+00	AF163900.2	NT	Homo sapiens chromosome 21 segment HS21C100
4531	14424		1.89	0.0E+00	AB037321.1	NT	Homo sapiens gene for netrin-like protein, partial cds
4541	14434	24216	1.91	0.0E+00	4557897	NT	Homo sapiens keratin 18 (KRT18) mRNA
4541	14434	24217	1.91	0.0E+00	4557897	NT	Homo sapiens keratin 18 (KRT18) mRNA
4542	14435	24218	1.3	0.0E+00	AF153919.1	NT	Homo sapiens inwardly-rectifying potassium channel Kir2.1 (KCNJ2) gene, exon 2 and complete cds
4542	14435	24219	1.3	0.0E+00	AF153919.1	NT	Homo sapiens inwardly-rectifying potassium channel Kir2.1 (KCNJ2) gene, exon 2 and complete cds
4543	14436	24220	1.18	0.0E+00	AF107441.1	NT	Mus musculus E-cadherin binding protein E7 mRNA, complete cds
4554	14013	23791	7.43	0.0E+00	4501720	NT	Homo sapiens tbin (TTN) mRNA
4554	14013	23792	7.43	0.0E+00	4501720	NT	Homo sapiens tbin (TTN) mRNA
4590	14452	24238	21.96	0.0E+00	118900.1	NT	Human endogenous retrovirus type K (HERV-K), gpi, pol and env genes

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Table 4

### Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4595	14458	24246	2.32	0.0E+00	BD61527.1	EST_HUMAN	QV2-BT0035-160400-142-005 BT0035 Homo sapiens cDNA
4574	14465		2.01	0.0E+00	AF066641.1	NT	Homo sapiens truncated tenascin XB (TNXB) gene, partial cds and TNXA gene recombination breakpoint region
4580	14470	24257	2.65	0.0E+00	AB037820.1	NT	Homo sapiens mRNA for KIAA1369 protein, partial cds
4580	14470	24258	2.65	0.0E+00	AB037820.1	NT	Homo sapiens mRNA for KIAA1369 protein, partial cds
4581	14471	24259	2.65	0.0E+00	M74039.1	NT	Homo displacement protein (CCAA1) mRNA
4585	14474	24262	1.82	0.0E+00	6463912.1	NT	Homo sapiens tuboporphin, subfamily 2, member A2 (BTN2A2), mRNA
4585	14474	24263	1.82	0.0E+00	6463912.1	NT	Homo sapiens tuboporphin, subfamily 2, member A2 (BTN2A2), mRNA
4586	10109	19026	1.03	0.0E+00	T56945.1	EST_HUMAN	y835G4.12 Shiga toxin total spliced (y837203) Homo sapiens cDNA, clone IMAGE:59310 5'
4586	10109	19030	1.03	0.0E+00	T56945.1	EST_HUMAN	y835G4.12 Shiga toxin total spliced (y837203) Homo sapiens cDNA, clone IMAGE:59310 5'
4587	14473		0.98	0.0E+00	BE728730.1	EST_HUMAN	BT017850321 NH, MGCC_21 Homo sapiens cDNA, clone IMAGE:3506821 5'
4587	14473		1.11	0.0E+00	MG60052.1	EST_HUMAN	BT017850321 NH, MGCC_44 Homo sapiens cDNA, clone IMAGE:3607987 5'
4583	14481	24267	1.03	0.0E+00	M59197.1	NT	Human AHNK nucleoporin mRNA, 5' end
4614	14502	24267	37.30	0.0E+00	M83092.1	EST_HUMAN	Human heparinobin and heparinobin-related protein (HP and HPR), genes, complete cds
4617	14505	24263	3.14	0.0E+00	M59197.1	NT	Human heparinobin and heparinobin-related protein (HP and HPR), genes, complete cds
4617	14505	24264	3.14	0.0E+00	AF184111.1	NT	Homo sapiens cyclophilin-related protein (NKTR), gene, complete cds
4620	14509	24207	1.12	0.0E+00	AF184111.1	NT	Homo sapiens KIAA0535 gene product (KIAA0535), mRNA
4621	14509	24268	1.34	0.0E+00	7692181	NT	Human CYP2D7A2 pseudogene for cytochrome P450, 2D6
4630	14524		1.54	0.0E+00	53467.1	NT	Homo sapiens bromodomain adjacent to zinc finger domain, 28 (BAZ2B), mRNA
4644	14532	24319	0.65	0.0E+00	7304022.1	NT	Homo sapiens bromodomain adjacent to zinc finger domain, 28 (BAZ2B), mRNA
4644	14532	24320	0.65	0.0E+00	7304022.1	NT	Homo sapiens bromodomain adjacent to zinc finger domain, 28 (BAZ2B), mRNA
4652	14638	24327	1.09	0.0E+00	AF028301.1	NT	Homo sapiens alpha-3 type X collagen (COL3A3) gene, promoter region, and exons 1-28
4654	14639	24330	0.62	0.0E+00	7018320	NT	Homo sapiens pituitary008 (A0013), mRNA
4555	14541	24331	0.82	0.0E+00	7018320	NT	Homo sapiens pituitary008 (A0013), mRNA
4555	14541	24330	0.82	0.0E+00	7018320	NT	Homo sapiens pituitary008 (A0013), mRNA
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4555	14541	24330	0.82	0.0E+00	7018320	NT	Homo sapiens pituitary008 (A0013), mRNA
4555	14541	24331	0.82	0.0E+00	7018320	NT	Homo sapiens pituitary008 (A0013), mRNA
4555	14541	24330	0.82	0.0E+00	7018320	NT	Homo sapiens pituitary008 (A0013), mRNA
4555	14541	24331	0.82	0.0E+00	7018320	NT	Homo sapiens pituitary008 (A0013),

Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4744	14628	24419	1.4	0.0E+00	P52740	SWISSPROT	ZINC FINGER PROTEIN 132
4745	14631	24417	0.97	0.0E+00	8922190	NT	Homo sapiens hypothetical protein DKF.ZP762E1312 (DKF.ZP762E1312), mRNA
4746	14633	24419	0.6	0.0E+00	AL183203.2	NT	Homo sapiens chromosome 21 segment HS210033
4752	14637	24424	7.76	0.0E+00	8922000	NT	Homo sapiens hypothetical protein FLJ20073 (FLJ20073), mRNA
4756	14641	24428	0.85	0.0E+00	7981970	NT	Homo sapiens KIAA0187 gene product (KIAA0187), mRNA
4757	14642	24429	1.86	0.0E+00	MB4081.1	NT	Human Tor-C-delta gene, exons 1-4, Tor-Y-delta gene, exons 1-2, T-cell receptor alpha (Tor-alpha) gene, J1-J81 segments; and Tor-C-alpha gene, exons 1-4
4757	14642	24430	1.95	0.0E+00	MB4081.1	NT	Human Tor-C-delta gene, exons 1-4, Tor-Y-delta gene, exons 1-2, T-cell receptor alpha (Tor-alpha) gene, J1-J81 segments; and Tor-C-alpha gene, exons 1-4
4758	14644	24432	1.95	0.0E+00	X94328.1	NT	H. sapiens MCP-2 gene
4759	14644	24433	1.89	0.0E+00	X94328.1	NT	H. sapiens MCP-2 gene
4762	14647	24436	1.08	0.0E+00	U65882.1	NT	Human collagenase type IV (GLG4) gene, exon 2
4763	14648	24437	3.22	0.0E+00	AL183380.2	NT	Homo sapiens chromosome 21 segment HS210033 mRNA
4776	14690	24447	0.95	0.0E+00	5032150	NT	Homo sapiens TATA box binding protein (TBP) associated factor, RNA polymerase II, 1, 28kD (TAF20)
4786	14671	24458	0.82	0.0E+00	6003918	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
4788	14673	24460	1.44	0.0E+00	X9241.1	NT	H. sapiens MCA gene
4791	14679	24463	1.97	0.0E+00	4555642	NT	Homo sapiens zinc finger protein (KIA00412) mRNA
4792	14677	24464	1.18	0.0E+00	AB014533.1	NT	Homo sapiens mRNA for KIA0033 protein, partial cds
4794	14679	24466	2.28	0.0E+00	6877648	NT	Mus musculus zinc finger protein interacting with K protein 1 (ZIK1), mRNA
4795	14680	24467	1.05	0.0E+00	5174500	NT	Homo sapiens meningioma expressed antigen 8 (coiled-coil proline-rich) (MGEA8), mRNA
4797	14682	24468	8.64	0.0E+00	4788199	NT	Homo sapiens desmoglein (DPI, DPL) (DSP) mRNA
4799	14684	24471	1.2	0.0E+00	V16723.1	NT	Homo sapiens gene encoding filensin, exon 8
4800	14685	24472	1.61	0.0E+00	7705546	NT	Homo sapiens zinc-finger DNA-binding protein (HUM-HOXY1), mRNA
4801	14686	24473	1.33	0.0E+00	AB010442.1	NT	Homo sapiens mRNA for immunoglobulin kappa light chain, anti-RD, therat 7
4806	14690	24477	24.91	0.0E+00	AF050066.1	NT	Homo sapiens MHC class I region
4808	14692	24477	2.43	0.0E+00	4505508	NT	Homo sapiens opiod receptor, delta 1 (OPRD1) mRNA
4809	14693	24480	2.46	0.0E+00	AF091711.1	NT	Homo sapiens splice variant ACAP350 mRNA, partial cds
4812	14713	23731	5.48	0.0E+00	4507720	NT	Homo sapiens titin (TTN) mRNA
4812	14713	23732	5.48	0.0E+00	4507720	NT	Homo sapiens titin (TTN) mRNA
4814	14697	24484	0.85	0.0E+00	AL277592.1	NT	Homo sapiens partial TTN gene for titin
4824	14705	24490	12.01	0.0E+00	4507720	NT	Homo sapiens titin (TTN) mRNA
4827	14709	24493	0.95	0.0E+00	D033602.1	NT	Homo sapiens COL4A3 gene for $\alpha 3(V)$ collagen, exon 44 and perial cds

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Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source
4831	14713	24490	1.62	0.0E+00	4503094	NT
						Homo sapiens fameryl diphosphate synthase [fameryl pyrophosphate synthetase, dimethylallyltransferase, geranyl transferase] (FPS) mRNA
4837	14319	24105	1.06	0.0E+00	4506052	NT
4845	14726	24508	1.31	0.0E+00 D1500.1	D1500.1	Human
4845	14726	24508	1.31	0.0E+00	D1500.1	NT
						Human mRNA for transcription factor AREB6, complete cds
4854	14734	24515	0.86	0.0E+00	A026388.1	NT
						Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 12 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
4871	14751	24530	1.34	0.0E+00 AL16294.2	N/A	Homo sapiens chromosome 21 segment HS21Q84
4879	14750	24533	1.45	0.0E+00 AW42778.1	EEST_HUMAN	IU-HI-RIJ-alv4-02-UJI.s1 NCBI GSAP SubS Homo sapiens cDNA clone MAOE-3063891_3'
4886	14768	24542	1.2	0.0E+00	8922268	NT
4890	14768	24540	7.99	0.0E+00	4507720	NT
4898	14768	24544	2.81	0.0E+00 AF058332.1	N/A	Homo sapiens tlin (TTN) mRNA
4898	14768	24544	2.81	0.0E+00 AF058332.1	N/A	Homo sapiens tlin (TTN) gene, alternative splice products, partial cds
4898	14768	24544	2.81	0.0E+00 AF058332.1	N/A	Homo sapiens tlin (TTN) gene, alternative splice products, partial cds
4894	14774	24552	2.95	0.0E+00	4507720	NT
4897	14777	N/A	4.34	0.0E+00 U14907.1	N/A	Homo sapiens tlin (TTN) mRNA
4910	14789	N/A	2.68	0.0E+00 BC048683.1	EEST_HUMAN	B01300720P.NH.MSCC 21 Homosapiens cDNA clone MAOE-36381'18 b'
4915	14784	24560	5.97	0.0E+00	4758160	NT
4925	14804	24574	0.89	0.0E+00 A0A028901.1	N/A	Homo sapiens desmoplamin (DP1, DP1) (DSP) mRNA
4930	14817	24584	1.68	0.0E+00	8923441	NT
4937	14817	24585	1.60	0.0E+00	8923441	NT
						Homo sapiens hypothetical protein FLJ20477 (FLJ20477), mRNA
						Homo sapiens hypothetical protein FLJ20477 (FLJ20477), mRNA
						Homo sapiente chromosome Xq28 melanoma antigen family A2a (MAGEA2a), melanoma antigen family A12 (MAGEA12), melanoma antigen family A2b (MAGEA2b), melanoma antigen family A3 (MAGEA3), callicrein (CALT), NAC(P/H dehydrogenase-like protein (NSDL), and L2-
4953	14930	24566	1.08	0.0E+00 U02671.2	N/A	Homo sapiens Chromosome Xq28 melanoma antigen family A2a (MAGEA2a), melanoma antigen family A12 (MAGEA12), melanoma antigen family A2b (MAGEA2b), melanoma antigen family A3 (MAGEA3), callicrein (CALT), NAC(P/H dehydrogenase-like protein (NSDL), and L2-
						Homo sapiens Chromosome Xq28 melanoma antigen family A2a (MAGEA2a), melanoma antigen family A12 (MAGEA12), melanoma antigen family A2b (MAGEA2b), melanoma antigen family A3 (MAGEA3), callicrein (CALT), NAC(P/H dehydrogenase-like protein (NSDL), and L2-
4953	14930	24566	1.08	0.0E+00 U02671.2	N/A	Homo sapiens Chromosome Xq28 melanoma antigen family A2a (MAGEA2a), melanoma antigen family A12 (MAGEA12), melanoma antigen family A2b (MAGEA2b), melanoma antigen family A3 (MAGEA3), callicrein (CALT), NAC(P/H dehydrogenase-like protein (NSDL), and L2-
4957	14933	24587	1.08	0.0E+00	4507720	NT
4957	14933	23761	5.81	0.0E+00	4507720	NT
4957	14933	23762	5.81	0.0E+00	4507720	NT
4956	14834	24602	3.51	0.0E+00	4507720	NT
4960	14835	24603	7.76	0.0E+00	4507720	NT
4968	14843	N/A	1.17	0.0E+00	4758225	NT
						Homo sapiens ESF-AP ubiquitin-protein ligase (UBE3A), exon 3
4978	14853	24619	1.35	0.0E+00 AB16705.1	N/A	Homo sapiens chromosome 21 segment HS21QC9
4978	14853	24619	1.35	0.0E+00 AL163209.2	N/A	Homo sapiens chromosome 21 segment HS21QC9
4987	14862	N/A	1.33	0.0E+00 AL163209.2	N/A	Homo sapiens chromosome 21 segment HS21QC9



## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) HR BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4980	14865	24930	37.76	0.0E+00	D50657.1	NT	Homo sapiens gamma-cytoplasmic actin (ACTG3P3) pseudogene
5000	14875	24930	2.28	0.0E+00	AJ271882.1	NT	Homo sapiens partial TTN gene for titin
5001	14876	24940	3.02	0.0E+00	4507720	NT	Homo sapiens titin (TTN) mRNA
5003	14878	24942	4.23	0.0E+00	4507720	NT	Homo sapiens titin (TTN) mRNA
5005	14013	23791	2.89	0.0E+00	4507720	NT	Homo sapiens titin (TTN) mRNA
5005	14013	23792	2.89	0.0E+00	4507720	NT	Homo sapiens titin (TTN) mRNA
5018	14902	24860	2.43	0.0E+00	X52938.1	NT	Bacillus amyloquelidensis sacB gene for exoenzyme [EC 2.4.1.10]
5037	14909	24881	1.84	0.0E+00	AF240035.1	NT	Homo sapiens vascular endothelial cadherin 2 mRNA, complete cds
5037	14909	24882	1.84	0.0E+00	AF240035.1	NT	Homo sapiens vascular endothelial cadherin 2 mRNA, complete cds
5044	14912	24886	1.01	0.0E+00	5454153	NT	Homo sapiens cyclophilin (USA-CYP) mRNA
5064	14920	24898	1.22	0.0E+00	8977700	NT	Homo sapiens G-protein coupled receptor (RE2), mRNA
5065	14913	23791	11.20	0.0E+00	4507720	NT	Homo sapiens titin (TTN) mRNA
5065	14913	23792	11.20	0.0E+00	4507720	NT	Homo sapiens titin (TTN) mRNA
5065	14913	23793	14.9	0.0E+00	4507720	NT	Homo sapiens titin (TTN) mRNA
5066	14913	23792	14.9	0.0E+00	4507720	NT	Homo sapiens titin (TTN) mRNA
5066	14913	23793	14.9	0.0E+00	4507720	NT	Homo sapiens titin (TTN) mRNA
5070	14940	24713	1.03	0.0E+00	M19055.1	NT	Homo sapiens PK domain containing 1, with ZNF domain (PRDM1) mRNA
5070	14940	24713	1.03	0.0E+00	M19055.1	NT	Human cellular fibronectin mRNA
5070	14940	24714	1.03	0.0E+00	M19055.1	NT	Human cellular fibronectin mRNA
5071	14941	24715	1.06	0.0E+00	U9328.1	NT	Human hereditary haemochromatosis region, histone 2A-like protein gene, hereditary haemochromatosis (HLA-H) gene, Rofet gene, and sodium phosphate transporter (NPT3) gene, complete cds
5080	14950	24720	3.04	0.0E+00	4507720	NT	Homo sapiens titin (TTN) mRNA
5086	14013	23791	6.27	0.0E+00	4507720	NT	Homo sapiens titin (TTN) mRNA
5090	14013	23792	6.27	0.0E+00	4507720	NT	Homo sapiens titin (TTN) mRNA
5098	14867	24743	1.34	0.0E+00	35475.1	NT	Homo sapiens titin (TTN) mRNA
5098	14867	24744	1.34	0.0E+00	35475.1	NT	Human olfactory receptor-like gene, complete cds
5098	14013	23791	9.38	0.0E+00	4507720	NT	Human olfactory receptor-like gene, complete cds
5099	14013	23792	9.38	0.0E+00	4507720	NT	Homo sapiens titin (TTN) mRNA
5124	14992	24705	0.94	0.0E+00	AF495958.1	NT	Homo sapiens DNA mismatch repair protein (MLH1) gene, complete cds
5125	14993	24706	1.35	0.0E+00	5390213	NT	Homo sapiens glyoxal 3 (GFC3) mRNA
5130	14997	24708	0.8	0.0E+00	AE000327.1	NT	Escherichia coli K-12 MG1655 section 217 of 400 of the complete genome
5140	15007	24776	1.09	0.0E+00	4885474	NT	Homo sapiens melanoma antigen, family C, 1 (MAGEC1), mRNA
5150	15026	24783	0.98	0.0E+00	4885474	NT	Homo sapiens melanoma antigen, family C, 1 (MAGEC1), mRNA
5162	15028	24794	1.59	0.0E+00	4756597	NT	Homo sapiens neurocaldesin, alpha, class 2A, member 1 (MNC2A1), mRNA

Table 4

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5165	15031	24797	1.12	0.0E+00	AF245703.1	NT	Homo sapiens toll-like receptor 6 (TLR6) mRNA, complete cds
5166	15031	24798	1.12	0.0E+00	AF245703.1	NT	Homo sapiens toll-like receptor 6 (TLR6) mRNA, complete cds
5166	15060	24814	1.72	0.0E+00	AF000661.1	NT	Homo sapiens placental growth hormone isoform hGH-V3 (hGH-V) mRNA, complete cds
5187	14013	23791	10.43	0.0E+00	4507720	NT	Homo sapiens titin (TTN) mRNA
5187	14013	23792	10.43	0.0E+00	4507720	NT	Homo sapiens titin (TTN) mRNA
5189	15052	24816	6.75	0.0E+00	4507720	NT	Homo sapiens titin (TTN) mRNA
5193	15056		1.38	0.0E+00	AL163265.2	NT	Homo sapiens chromosome 21 segment HS2110265
5196	15058	24822	3.97	0.0E+00	4507720	NT	Homo sapiens titin (TTN) mRNA
5196	15058	24823	3.97	0.0E+00	4507720	NT	Homo sapiens titin (TTN) mRNA
5198	15059	24824	0.96	0.0E+00	4502398	NT	Homo sapiens desmin filament structural protein 1, filament (BFSP1) mRNA
5208	15069		15.06	0.0E+00	AF093083.1	NT	Homo sapiens acyl-coA oxidase (ACOX2) gene, nuclear gene encoding mitochondrial protein, exon 15
5214	15137	24830	2.25	0.0E+00	AF137268.1	NT	Homo sapiens leucidin 12 (KRT12) gene, complete cds
5214	15137	24831	2.25	0.0E+00	AF137268.1	NT	Homo sapiens leucidin 12 (KRT12) gene, complete cds
5226	15160	24917	2.69	0.0E+00	6246678	NT	Homo sapiens proboscoidin alpha 13 (PCDH13) mRNA
5234	15168	24928	3.82	0.0E+00	BE031030.1	EST_HUMAN	PCS-GN0076.510000-015-003 GN0076 Homo sapiens cDNA
5238	15162	24930	3.12	0.0E+00	AF182034.1	NT	Homo sapiens polycystic kidney disease-like 2 protein (PKD2) mRNA, complete cds
5238	15162	24931	3.12	0.0E+00	AF182034.1	NT	Homo sapiens polycystic kidney disease-like 2 protein (PKD2) mRNA, complete cds
5245	15168	24940	1.92	0.0E+00	X01683.1	NT	H1 sapiens immunoglobulin heavy chain gene, variable region
5245	15168	24941	1.92	0.0E+00	X01683.1	NT	H1 sapiens immunoglobulin heavy chain gene, variable region
5307	15228	25032	5.8	0.0E+00	BE075498.1	EST_HUMAN	711G05.X1 NCI CGAP CLL1 Homo sapiens cDNA clone IMAGE:3394250.3
5308	15229	25033	1.77	0.0E+00	BE207593.1	EST_HUMAN	H09602.X1 NCI CGAP LUT4 Homo sapiens cDNA clone IMAGE:3105184.9 similar to SW:Y064_HUMAN
5309	15230	25034	1.67	0.0E+00	BE794412.1	EST_HUMAN	P42964 HYPOTHETICAL PROTEIN KIA00054.1
5309	15230	25035	1.67	0.0E+00	BE794412.1	EST_HUMAN	G011894422F1 NIH MGC 7 Homo sapiens cDNA clone IMAGE:3543904.5
5311	15232	25037	5.46	0.0E+00	M29808.1	NT	G011894422F1 NIH MGC 7 Homo sapiens cDNA clone IMAGE:3543904.5
5313	15234	25039	1.81	0.0E+00	AT019393.1	EST_HUMAN	Homo sapiens ectocarpal peroxidase (EPP) gene, exon 7
5319	19442	25044	5.42	0.0E+00	11421038	NT	HEAVY CHAIN PRECURSOR VJ REGION (HUMAN);
5324	15244		2.91	0.0E+00	BF059962.1	EST_HUMAN	Homo sapiens Sp4 transcription factor (SP4) mRNA
5327	15247	25052	1.92	0.0E+00	BF059962.1	EST_HUMAN	G02118928F1 NIH MGC 59 Homo sapiens cDNA clone IMAGE:4276254.5
5333	15263	25078	1.31	0.0E+00	HE262784.1	EST_HUMAN	G01014861F1 NIH MGC 10 Homo sapiens cDNA clone IMAGE:3447839.5
5337	15267	25080	1.6	0.0E+00	BF263268.1	EST_HUMAN	G01103891F1 NIH MGC 15 Homo sapiens cDNA clone IMAGE:2988310.5
5337	15267	25081	1.6	0.0E+00	BF263268.1	EST_HUMAN	G02071372F1 NCI CGAP Bm64 Homo sapiens cDNA clone IMAGE:4214272.5
5348	15987	26122	1.71	0.0E+00	4557894	NT	G02071372F1 NCI CGAP Bm64 Homo sapiens cDNA clone IMAGE:4214272.5

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5362	15272	25701	5.24	0.0E+00	AF257737.1	NT	Homo sapiens ciliary dynein heavy chain 9 (DNAH9) mRNA, complete cds
5362	15272	25702	5.24	0.0E+00	AF257737.1	NT	Homo sapiens ciliary dynein heavy chain 9 (DNAH9) mRNA, complete cds
5362	15282	25714	1.45	0.0E+00	D24935.1	NT	Human gene for dihydropyrimidine succinyltransferase, complete cds (exon 1-16)
5362	15282	25715	1.46	0.0E+00	D24935.1	NT	Human gene for dihydropyrimidine succinyltransferase, complete cds (exon 1-16)
5374	15294	25741	1.97	0.0E+00	11422819	NT	Homo sapiens ciliary receptor, family 2, subfamily F, member 1 (OR2F1), mRNA
5396	15305	25786	3.26	0.0E+00	BF026931.1	EST_HUMAN	0023423222F1 NC1 CGAP_Bm37 Homo sapiens cDNA clone IMAGE:4176888 5'
5396	15305	25789	3.26	0.0E+00	BF026931.1	EST_HUMAN	0023423222F1 NC1 CGAP_Bm37 Homo sapiens cDNA clone IMAGE:4176888 5'
5359	15309	25791	2.35	0.0E+00	BF131336.1	EST_HUMAN	Homo sapiens calcium channel, voltage-dependent, alpha 1G subunit (CACNA1G), mRNA
5359	15311	25862	4.21	0.0E+00	11434332	NT	MRO-SU0037-493400-001-407 SN037 Homo sapiens cDNA
5420	15341		2.43	0.0E+00	AW867318.1	EST_HUMAN	601105351F1 NH_MGC_16 Homo sapiens cDNA clone IMAGE:2867903 5'
5431	15391	25909	3.05	0.0E+00	BE202968.1	EST_HUMAN	301105351F1 NH_MGC_16 Homo sapiens cDNA clone IMAGE:2867903 5'
5431	15391	25909	3.05	0.0E+00	BE202968.1	EST_HUMAN	301105351F1 NH_MGC_16 Homo sapiens cDNA clone IMAGE:2867903 5'
5444	15395	25920	1.31	0.0E+00	11420819	NT	Homo sapiens ciliary receptor, family 2, subfamily F, member 1 (OR2F1), mRNA
5444	15395	25921	1.31	0.0E+00	11420819	NT	Homo sapiens ciliary receptor, family 2, subfamily F, member 1 (OR2F1), mRNA
5451	15372	25929	5.35	0.0E+00	AF094254.1	NT	Homo sapiens very long-chain acyl-CoA synthetase homolog 1 mRNA, complete cds
5451	15372	25930	5.35	0.0E+00	AF094254.1	NT	Homo sapiens very long-chain acyl-CoA synthetase homolog 1 mRNA, complete cds
5451	15378	25935	2.9	0.0E+00	AF224693.1	NT	Homo sapiens Surf 5 and Surf 6 genes
5451	15378	25935	2.9	0.0E+00	AF224693.1	NT	Homo sapiens Surf 5 and Surf 6 genes
5470	15390	25935	3.69	0.0E+00	AW409472.1	EST_HUMAN	EST102238 Human fetal brain, Striatum (CAB393209) Homo sapiens cDNA clone HF50M48
5474	15394	25958	3.67	0.0E+00	AW409472.1	EST_HUMAN	UHF-8LD-48-4-020-UI-RT NH_MGC_37 Homo sapiens cDNA clone IMAGE:3051558 5'
5489	15408	25471	5.74	0.0E+00	AW361877.1	EST_HUMAN	PM3-CT10263-061299-007-405 CT10263 Homo sapiens cDNA
5489	15408	25472	5.74	0.0E+00	AW361877.1	EST_HUMAN	PM3-CT10263-061299-007-405 CT10263 Homo sapiens cDNA
5489	15408	25473	5.74	0.0E+00	AW361877.1	EST_HUMAN	PM3-CT10263-061299-007-405 CT10263 Homo sapiens cDNA
5491	15410	25476	1.88	0.0E+00	U36291.1	NT	Human beta-actin-subunit (BAM22) gene, exon 13
5531	15448	25615	3.29	0.0E+00	AA106905.1	EST_HUMAN	z99611.1 Stratigene muscle 957229 Homo sapiens cDNA clone IMAGE:527893 5' similar to gbX03740
5532	15449	25616	1.5	0.0E+00	AJ000345.1	NT	MYOSIN HEAVY CHAIN, SKELETAL M.SCLE (HUMAN);
5532	15449	25617	1.5	0.0E+00	AJ000345.1	NT	Homo sapiens KVLQ11 gene
5532	15449	25617	1.5	0.0E+00	AJ000345.1	NT	Homo sapiens KVLQ11 gene
5537	15454	25624	2	0.0E+00	AI207616.1	EST_HUMAN	4A2981 Human fetal liver cDNA library Homo sapiens cDNA
5548	15464	25634	3.88	0.0E+00	11418901	NT	Homo sapiens proboscoidin beta 2 (PODIB2), mRNA
5555	15471	25642	0.70	0.0E+00	BE400822.1	EST_HUMAN	001345141F1 NH_MGC_8 Homo sapiens cDNA clone IMAGE:3077643 5'
5555	15471	25643	1.58	0.0E+00	10049478	NT	Mus musculatus acron (Ac2), mRNA
5557	15473	25544	3.03	0.0E+00	U69981.1	NT	Human L-type calcium channel beta-1 subunit (CACNLB1) gene, exon 13B and isoform beta-1b, complete cds

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5567	15473	25546	3.03	0.0E+00	U69961.1	NT	Human L-type calcium channel beta-1 subunit (CAVCLB1) gene, exon 13B and isoform beta-1B, complete cds
5568	15480	25563	2.1	0.0E+00	BF339835.1	EST_HUMAN	602336527ZF1 NCBI, Bm54 Homo sapiens cDNA, clone IMAGE:4194321 5'
5569	15482	25563	2.93	0.0E+00	BE273983.1	EST_HUMAN	501104462F1 NIH, MGC, 14 Homo sapiens cDNA clone IMAGE:3347469 5'
5574	15489	25566	1.74	0.0E+00	BF696005.1	EST_HUMAN	602185852F1 NIH, MGC, 45 Homo sapiens cDNA clone IMAGE:4310078 5'
5586	15510	25588	2.47	0.0E+00	AF217286.1	NT	Homo sapiens cadherin 20 (CDH20) mRNA, complete cds
5597	15511	25586	1.86	0.0E+00	BE28144.1	EST_HUMAN	RC5-ET0027-210030-022-G10 ET0027 Homo sapiens cDNA
5601	15515	25593	1.41	0.0E+00	BE59636.1	EST_HUMAN	501146287F1 NIH, MGC, 56 Homo sapiens cDNA clone IMAGE:3303463 5'
5601	15530	25613	1.60	0.0E+00	BF031742.1	EST_HUMAN	501156000F1 NIH, MGC, 38 Homo sapiens cDNA clone IMAGE:3327776 5'
5615	15530	25594	1.65	0.0E+00	BF031742.1	EST_HUMAN	501156000F1 NIH, MGC, 38 Homo sapiens cDNA clone IMAGE:3327776 5'
5631	15545	25633	1.54	0.0E+00	U33066.1	EST_HUMAN	50090605.1 Soares, parathyroid, tumor, NHPHA Homo sapiens cDNA, clone IMAGE:321765 5'
5632	15549	25634	1.54	0.0E+00	U33066.1	EST_HUMAN	50090605.1 Soares, parathyroid, tumor, NHPHA Homo sapiens cDNA, clone IMAGE:321765 5'
5632	15549	25634	2.16	0.0E+00	AF012618.1	NT	Homo sapiens familial mental retardation protein 2 (FMR2) gene, exon 14
5634	15548	25636	3.67	0.0E+00	BE280187.1	EST_HUMAN	501156518F1 NIH, MGC, 21 Homo sapiens cDNA clone IMAGE:3603323 5'
5638	15548	25642	2.74	0.0E+00	BE58910.1	EST_HUMAN	501126301F1 NIH, MGC, 71 Homo sapiens cDNA clone IMAGE:3914238 5'
5649	15561	25664	1.63	0.0E+00	U143307.1	NT	Homo sapiens KIAA0735 gene product: synaptic vesicle protein 28 homolog (KIAA0735), mRNA
5649	15561	25665	1.63	0.0E+00	U143307.1	NT	Homo sapiens KIAA0735 gene product: synaptic vesicle protein 28 homolog (KIAA0735), mRNA
5650	15450	25598	10.86	0.0E+00	9789936	NT	Homo sapiens potassium voltage-gated channel, Shal-related subfamily, member 2 (KCND2), mRNA
5683	15574	25671	1.29	0.0E+00	AA169306.1	EST_HUMAN	24000.L1 Soares, NHPMP, ST Homo sapiens cDNA clone IMAGE:669005 5' similar to SW-1Y105 HUMAN P42684 HYPOTHETICAL MYELOID CELL LINE PROTEIN 5 ;
5683	15574	25672	1.29	0.0E+00	AA169306.1	EST_HUMAN	24000.L1 Soares, NHPMP, ST Homo sapiens cDNA clone IMAGE:669005 5' similar to SW-1Y105 HUMAN P42684 HYPOTHETICAL MYELOID CELL LINE PROTEIN 5 ;
5689	15580	25650	13.03	0.0E+00	U34625.1	NT	Human T cell surface glycoprotein CD 5 mRNA, complete cds
5690	15589	25681	13.03	0.0E+00	U34625.1	NT	Human T cell surface glycoprotein CD 5 mRNA, complete cds
5730	15633	25742	1.41	0.0E+00	AU137712.1	EST_HUMAN	ALU137712 PLACE1 Homo sapiens cDNA clone IMAGE:1007201 5'
5741	15649	25756	3.4	0.0E+00	U46992.1	NT	Human G protein-coupled receptor GPR-9-6 gene, complete cds
5755	15683	25770	4.14	0.0E+00	AA2407.1	EST_HUMAN	TR-0584195 G954195 LEUKOCYTE SURFACE PROTEIN ;
5769	15684	25771	3.67	0.0E+00	U154913	NT	zgf1 cd3.1 Stragelens INT, neuron (983723) Homo sapiens cDNA, clone IMAGE:646305 5' similar to
5769	15684	25772	3.67	0.0E+00	U154913	NT	zgf1 cd3.1 Stragelens INT, neuron (983723) Homo sapiens cDNA, clone IMAGE:646305 5' similar to
5775	15682	25790	2.8	0.0E+00	BE25773.1	EST_HUMAN	Homo sapiens xylitol transferase II (XT2), mRNA
5784	15650	25600	1.47	0.0E+00	U36503.1	NT	Homo sapiens anion exchanger (AE1) gene, exons 1-20
5795	15701	25611	1.39	0.0E+00	U1493530	NT	Homo sapiens peptide transporter 3 (LOC51295), mRNA



Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar BLAST Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6042	16945	29077	1.81	0.0E+00	BF06897.1	EST_HUMAN	IL6-GG032-180900-145-487-G07-G0322 Homo sapiens cDNA
6063	16046	29191	3.16	0.0E+00	AA190766.1	EST_HUMAN	z984e03.11 Stralagene HLA cell s3 937216 Homo sapiens cDNA clone IMAGE:527732 5'
6071	16054	29201	6.08	0.0E+00	AB40621.1	EST_HUMAN	IL3-510024-230799-001-10T024 Homo sapiens cDNA
6071	16054	29202	6.08	0.0E+00	AB40621.1	EST_HUMAN	IL3-510024-230799-001-10T024 Homo sapiens cDNA
6076	16056	29203	3.07	0.0E+00	11436528	NT	Homo sapiens CD8 antigen (CD8), mRNA
6054	15104	24957	1.98	0.0E+00	BE590381.1	EST_HUMAN	60143369771 NIH MGCC_33 Homo sapiens cDNA clone IMAGE:3802267 5'
6059	15109	24972	13.15	0.0E+00	BE67898.1	EST_HUMAN	60143369771 NIH MGCC_36 Homo sapiens cDNA clone IMAGE:3847697 5'
6059	15109	24973	13.15	0.0E+00	BE67898.1	EST_HUMAN	60143369771 NIH MGCC_36 Homo sapiens cDNA clone IMAGE:3847697 5'
6101	15025	28130	2.07	0.0E+00	BE560162.1	EST_HUMAN	744903.x1 NCI-GCAP Lu24 Homo sapiens cDNA clone IMAGE:3231581 3' similar to SW-GG68_HUMAN
6101	15095	28131	2.07	0.0E+00	BE560162.1	EST_HUMAN	Q08973 GOLGIN-96.1
6118	16012	28160	1.48	0.0E+00	BF088376.1	EST_HUMAN	Q08973 GOLGIN-96.1
6121	16015	28163	3.84	0.0E+00	AA199105.1	EST_HUMAN	CM1-HT0877A05020-397-q11 HT0877 Homo sapiens cDNA
6128	15073		10.28	0.0E+00	1103-4810	NT	2734-033.11 Scarsa VHHHPu_S1 Homo sapiens cDNA clone IMAGE:965332 5'
6135	15052	28118	2.57	0.0E+00	BF568935.1	EST_HUMAN	Homo sapiens calnexin (calnexin-associated protein), delta 2 (neural jacksonin-related em-repeat protein) (CTNND2), mRNA
6142	15060		2.32	0.0E+00	U03065.1	NT	Human NTCL2 gene, complete cds
6146	16019	28167	2.8	0.0E+00	AF217285.1	NT	Human NTCL2 gene, complete cds
6161	15128	24976	2.79	0.0E+00	AF217285.1	NT	Homo sapiens cathepsin 20 (CDK20) mRNA, complete cds
6161	15128	24976	2.79	0.0E+00	11420776	NT	Homo sapiens melanoma antigen, family B, 2 (IMAGEB2), mRNA
6168	15128	24976	5.63	0.0E+00	BE522941.1	EST_HUMAN	60144895471 NIH MGCC_19 Homo sapiens cDNA clone IMAGE:3501829 5'
6169	15128	24976	2.32	0.0E+00	237976.1	NT	H. sapiens mRNA for latent transforming growth factor-beta binding protein (LTBP-2)
6169	15128	24976	2.32	0.0E+00	237976.1	NT	H. sapiens mRNA for latent transforming growth factor-beta binding protein (LTBP-2)
6169	15128	24976	2.32	0.0E+00	237976.1	NT	H. sapiens mRNA for latent transforming growth factor-beta binding protein (LTBP-2)
6170	15127	24946	2.83	0.0E+00	AF267737.1	NT	Homo sapiens ciliary dynein heavy chain 9 (DNAH9) mRNA, complete cds
6170	15127	24946	2.83	0.0E+00	AF267737.1	NT	Homo sapiens ciliary dynein heavy chain 9 (DNAH9) mRNA, complete cds
6176	16132	24951	1.35	0.0E+00	AF310106.1	NT	Homo sapiens NALP1 mRNA, complete cds
6176	16064	28213	2.18	0.0E+00	BF656905.1	EST_HUMAN	60216865271 NIH MGCC_45 Homo sapiens cDNA clone IMAGE:4310076 5'
6181	16037	28217	3.89	0.0E+00	L01978.1	NT	Human type IV sodium channel alpha polypeptide (SCN4A) gene, exon 19
6190	16078	28224	6.61	0.0E+00	BF300996.1	EST_HUMAN	60216865271 NIH MGCC_17 Homo sapiens cDNA clone IMAGE:4123948 5'
6193	16078	28224	1.76	0.0E+00	U41302.1	NT	Human chromosome 16 creatine transporter (SLC6A8) and (CDM) paralogue genes, complete cds
6226	16091	28241	1.34	0.0E+00	AW954806.1	EST_HUMAN	EST1596876 NIH MGCC sequences, MGCC Homo sapiens cDNA
6226	16092	28242	1.41	0.0E+00	BE254103.1	EST_HUMAN	60111396871 NIH MGCC_16 Homo sapiens cDNA clone IMAGE:3354460 5'

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6237	16103	26293	5.9	0.0E+00	AU133213.1	EST_HUMAN	AU133213.2 NR294 Homo sapiens cDNA, clone NT29R-4001566 5'
6263	16119	26279	2.44	0.0E+00	AU14706.1	EST_HUMAN	AU147070 Y9AAT1 Homo sapiens cDNA, clone Y76AA1002365 5'
6290	16126	26279	1.31	0.0E+00	BE897286.1	EST_HUMAN	607431819F1 NIH_MGC_72 Homo sapiens cDNA, clone IMAGE:3617184 5'
6290	16126	26280	1.31	0.0E+00	BE897286.1	EST_HUMAN	607431819F1 NIH_MGC_72 Homo sapiens cDNA, clone IMAGE:3617184 5'
6273	16137	24350	1.97	0.0E+00	AF137286.1	NT	Homo sapiens keratin 12 (KRT12) gene, complete cds
6273	16137	24431	1.97	0.0E+00	AF137286.1	NT	Homo sapiens keratin 12 (KRT12) gene, complete cds
6268	16150	26305	3.63	0.0E+00	11439359	NT	Homo sapiens vitamin D (1,25-dihydroxyvitamin D3) receptor (VDR), mRNA
6266	16150	26303	3.63	0.0E+00	11439359	NT	Homo sapiens vitamin D (1,25-dihydroxyvitamin D3) receptor (VDR), mRNA
6302	16160	26323	25.51	0.0E+00	AI25344.1	EST_HUMAN	cc07407.x1 Source: placenta, Backscans, 20kxHP800W Homo sapiens cDNA, clone IMAGE:1714844 3' similar to SW:ARSD_HUMAN P51689 ARYL SULFATASE D PRECURSOR, contains element HOR repetitive element.
6302	16160	26324	25.51	0.0E+00	AI25344.1	EST_HUMAN	cc07407.x1 Source: placenta, Backscans, 20kxHP800W Homo sapiens cDNA, clone IMAGE:1714844 3' similar to SW:ARSD_HUMAN P51689 ARYL SULFATASE D PRECURSOR, contains element HOR repetitive element.
6304	16168	26326	18.73	0.0E+00	11426352	NT	Homo sapiens myosin, heavy polypeptide 8, skeletal muscle, perinatal (MYH8), mRNA
6304	16168	26327	18.73	0.0E+00	11426352	NT	Homo sapiens myosin, heavy polypeptide 8, skeletal muscle, perinatal (MYH8), mRNA
6306	16170	26327	14.09	0.0E+00	BF337375.1	EST_HUMAN	602303509F1 NCBI_CGAP_Breg4 Homo sapiens cDNA, clone IMAGE:4182839 5'
6306	16172	26329	6.1	0.0E+00	AA124543.1	EST_HUMAN	3610500.1 Stralageme muscle 837209 Homo sapiens cDNA, clone IMAGE:562601 5' similar to TR:G056932
6328	16191	26353	6.72	0.0E+00	AF056213.1	NT	Homo sapiens ankyrin 1 (ANK1) mRNA, complete cds
6328	16191	26354	6.72	0.0E+00	AF056213.1	NT	Homo sapiens ankyrin 1 (ANK1) mRNA, complete cds
6337	16200	26360	7.66	0.0E+00	X03712.1	NT	H sapiens DNA for ZN2G2 pseudogene, exon 4
6339	16202	26362	11.09	0.0E+00	U05448.1	NT	Homo P24 receptor mRNA, complete cds
6339	16202	26363	11.09	0.0E+00	U05448.1	NT	Homo P24 receptor mRNA, complete cds
6341	16212	26372	1.43	0.0E+00	AF056503.1	EST_HUMAN	EST1368593 IMAGE reassessments, IMAGE Homo sapiens cDNA
6341	16212	26374	2.54	0.0E+00	AF050516.1	EST_HUMAN	EST1362696 IMAGE reassessments, IMAGE Homo sapiens cDNA
6386	16261	26411	1.97	0.0E+00	AW239326.1	EST_HUMAN	X039005.Y1 NCBI_CGAP_Lu01 Homo sapiens cDNA, clone IMAGE:2576940 5' similar to TR:G06060 008960
6400	16281	26421	1.8	0.0E+00	AU117553.1	EST_HUMAN	NIH3T3 TRANSSCRIPTION FACTOR GENESIS 3
6401	16283	26422	3.04	0.0E+00	AU117553.1	EST_HUMAN	AU117553 HEMBA1 Homo sapiens cDNA, clone HEMBA1007681 5'
6411	16272	26434	54.66	0.0E+00	AA211063.1	EST_HUMAN	Human desmin heavy peptide 2 receptor (GLP2R), mRNA
6402	16321	26466	4.25	0.0E+00	AF52691.1	EST_HUMAN	af5002.1 Stralageme muscle 837209 Homo sapiens cDNA, clone IMAGE:562203 5' similar to gb:303740
6411	16272	26434	54.66	0.0E+00	AA211063.1	EST_HUMAN	MYO2IN HEAVY CHAIN, SKELETAL MUSCLE (HUMAN);
6402	16321	26466	4.25	0.0E+00	AF52691.1	EST_HUMAN	cn17605.x1 Normal Human Trabecular Bone Cells Homo sapiens cDNA, clone N1-ITBC_cn17406 random

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6462	16321	26437	4.25	0.0E+00	AI72291.1	EST_HUMAN	cn17d5.x1 Normal Human Trabecular Bone Cells Homo sapiens cDNA clone NHTBC_cn17d5 random
6466	16358	26530	1.59	0.0E+00	AF064205.1	NT	Homo sapiens dynactin 1 (DCTN1) gene, alternatively spliced products, exons 7 through 32 and complete
6469	16358	26531	1.59	0.0E+00	AF064205.1	NT	Homo sapiens dynactin 1 (DCTN1) gene, alternatively spliced products, exons 7 through 32 and complete
6515	16374	26551	1.3	0.0E+00	11417342	NT	Homo sapiens semis domain, seven thrombospondin repeats (type 1 and type 1-like), transmembrane domain
6530	16399	26569	1.98	0.0E+00	6912735	NT	(TM) and short cytosolic domain, (semaphorin) 5A (SEMA5A), mRNA
6534	16392	26571	5.37	0.0E+00	BF17205.1	EST_HUMAN	Homo sapiens transient receptor potential channel 5 (TRPC5), mRNA
6539	16397	26576	2.98	0.0E+00	AU12922.1	EST_HUMAN	6011883468F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:3103729 5'
6550	16408	26580	6.49	0.0E+00	4501848	NT	Homo sapiens ATP-binding cassette, sub-family A (ABC1), member 3 (ABCA3), mRNA
6555	16413	26580	4.97	0.0E+00	BE139870.1	EST_HUMAN	6011883468F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:3103729 5'
6556	16414	26581	4.97	0.0E+00	BE139870.1	EST_HUMAN	6011883468F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:3103729 5'
6559	16414	26582	60.88	0.0E+00	AU120424.1	EST_HUMAN	6011883468F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:3103729 5'
6565	16414	26583	60.88	0.0E+00	AU120424.1	EST_HUMAN	6011883468F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:3103729 5'
6574	16423	26614	1.82	0.0E+00	BE167610.1	EST_HUMAN	6011883468F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:3103729 5'
6574	16423	26615	1.82	0.0E+00	BE167610.1	EST_HUMAN	6011883468F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:3103729 5'
6582	16525	26650	1.29	0.0E+00	AI149791.1	EST_HUMAN	6011883468F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:3103729 5'
6583	16525	26719	3.72	0.0E+00	BE169461.1	EST_HUMAN	6011883468F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:3103729 5'
6584	16534	26726	3.97	0.0E+00	M34872.1	EST_HUMAN	6011883468F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:3103729 5'
6584	16534	26730	3.97	0.0E+00	M34872.1	NT	Human amyloid-beta protein (APP) gene, exon 11
6574	16554	26749	1.05	0.0E+00	AA307551.1	EST_HUMAN	6011883468F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:3103729 5'
6577	16557	26750	7.54	0.0E+00	AU142402.1	EST_HUMAN	6011883468F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:3103729 5'
6588	16558	26750	8.73	0.0E+00	BE167610.1	EST_HUMAN	6011883468F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:3103729 5'
6714	16594	26783	1.96	0.0E+00	AL120124.1	EST_HUMAN	6011883468F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:3103729 5'
6714	16594	26784	1.96	0.0E+00	AL120124.1	EST_HUMAN	6011883468F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:3103729 5'
6720	16610	26810	1.31	0.0E+00	BE167610.1	EST_HUMAN	6011883468F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:3103729 5'
6742	16621	26810	1.35	0.0E+00	AW1900549.1	EST_HUMAN	6011883468F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:3103729 5'
6747	16626	26813	14.35	0.0E+00	AW157233.1	EST_HUMAN	6011883468F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:3103729 5'
6775	16634	26842	1.16	0.0E+00	BE145697.1	EST_HUMAN	6011883468F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:3103729 5'
6775	16634	26843	1.16	0.0E+00	BE145697.1	EST_HUMAN	6011883468F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:3103729 5'





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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Max Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7040	16917	27107	1.83	0.0E+00	BF700166.1	EST_HUMAN	60212766AF1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:294542 5'
7040	16917	27108	1.83	0.0E+00	BF700166.1	EST_HUMAN	60212766AF1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:294542 5'
7069	16946	27137	6.35	0.0E+00	AA95257.1	EST_HUMAN	060402.1 NCI CGAP_L66 Homo sapiens cDNA clone IMAGE:1602184 3' similar to gb:M36772.6/S1 RIBOSOMAL PROTEIN L7A (HUMAN)
7073	16950	27143	3.54	0.0E+00	10947037	EST_HUMAN	Homo sapiens ankyrin 1, cytosolic (ANK1), transcript variant 1, mRNA
7088	16955	27159	1.28	0.0E+00	Y1107.3	NT	Homo sapiens ankyrin 1, cytosolic (ANK1), transcript variant 1, mRNA
7096	16972		1.48	0.0E+00	AV11837.1	EST_HUMAN	AV11837.1/H18 Homo sapiens cDNA clone F11242AF11 3'
7098	16976	27159	3.64	0.0E+00	AW337277.1	EST_HUMAN	307307.1 NCI CGAP_P61 Homo sapiens cDNA clone IMAGE:283394 3' similar to gb:X53587
7102	16979	27171	1.57	0.0E+00	AU32095.1	EST_HUMAN	INTREGIN BETA-4 SUBUNIT PRGUR-SQ (HUMAN)
7147	17024	27218	2.84	0.0E+00	AB02923.1	NT	Homo sapiens mRNA for KIA0454 Protein, partial cds
7148	17025	27219	4.41	0.0E+00	AN192233.1	EST_HUMAN	144800.X1 Soares_NFL_1_G8C_51 Homo sapiens cDNA clone IMAGE:285506 3'
7148	17025	27220	4.41	0.0E+00	AN192233.1	EST_HUMAN	144800.X1 Soares_NFL_1_G8C_51 Homo sapiens cDNA clone IMAGE:285506 3'
7176	17053	27241	2.84	0.0E+00	AL040428.1	EST_HUMAN	DKT2434C1814.1 3' 434 (synonym: hies3) Homo sapiens cDNA clone DK2434C1814 3'
7176	17053	27242	2.84	0.0E+00	AL040428.1	EST_HUMAN	DKT2434C1814.1 3' 434 (synonym: hies3) Homo sapiens cDNA clone DK2434C1814 3'
7177	17054	27243	1.17	0.0E+00	AF138901.1	NT	Homo sapiens killer inhibitory receptor 2-2-1 (KIR221) and killer inhibitory receptor 2-2-2 (KIR222) genes, partial cds
7178	17055	27244	18.6	0.0E+00	AB040945.1	NT	Homo sapiens mRNA for KIA1812 protein, partial cds
7198	17075	27261	3.97	0.0E+00	11422867	NT	Homo sapiens tumor protein p73 (TP73), mRNA
7204	17091	27269	1.28	0.0E+00	K01241.1	NT	Human 10 rearranged H-chain epsilon-3 pseudogene, constant region
7207	17084	27272	2.65	0.0E+00	AB024930.1	NT	Homo sapiens mRNA for KIA0623 protein, partial cds
7207	17084	27273	2.65	0.0E+00	AB024930.1	NT	Homo sapiens mRNA for KIA0623 protein, partial cds
7210	17087	27277	1.96	0.0E+00	AV960736.1	EST_HUMAN	AV960739 GLC Homo sapiens cDNA clone GLC/G12 3'
7213	17090	27280	3.43	0.0E+00	7706538	NT	Homo sapiens polyoma-1, (PDL), mRNA
7231	17108	27298	3.86	0.0E+00	BE31402.1	EST_HUMAN	501141119FT NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3140740 5'
7231	17108	27299	3.86	0.0E+00	BE31402.1	EST_HUMAN	501141119FT NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3140740 5'
7241	17118	27313	1.91	0.0E+00	X14766.1	NT	Human mRNA for CABA-A receptor, alpha 1 subunit
7250	17127	27320	2.12	0.0E+00	AB94407.1	EST_HUMAN	wb4at2.1 NCI CGAP_G08 Homo sapiens cDNA clone IMAGE:2473150 3' similar to SW:MG63_HUMAN O15460 MELANOMA-ASSOCIATED ANTIGEN B3 ;
7254	17131	27324	4.49	0.0E+00	9285695	NT	Homo sapiens polychaetin alpha 8 (PCDH8), mRNA
7263	17140	27333	1.54	0.0E+00	AW65831.1	EST_HUMAN	ES1370381 IMAGE ressequencing, IMAGE Homo sapiens cDNA
7269	17146	27340	1.46	0.0E+00	5635487	NT	Human endogenous retrovirus, complete genome
7290	17157	27352	6.88	0.0E+00	11439995	NT	Homo sapiens MAP-kinase activating death domain (MADD), mRNA

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7290	17106	27365	1.44	0.0E+00	AB01150.1	NT	Homo sapiens mRNA for KIAA0578 protein, partial cds
7291	17107	27360	2.50	0.0E+00	BE704623.1	EST_HUMAN	601380294F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3943440 5'
7298	17174	27374	1.24	0.0E+00	BE83943.1	EST_HUMAN	60151024F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3911986 5'
7299	17174	27375	1.24	0.0E+00	BE83943.1	EST_HUMAN	60151024F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3911986 5'
7308	17184	27383	1.36	0.0E+00	AA344400.1	EST_HUMAN	EST760505 Gall bladder 71 Homo sapiens cDNA 5' end
7309	17184	27384	1.6	0.0E+00	AA344400.1	EST_HUMAN	EST760505 Gall bladder 71 Homo sapiens cDNA 5' end
7300	17227	27429	1.39	0.0E+00	BE270053.1	EST_HUMAN	6040005.Y1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:2823973 5' similar to gbL35049 Mus musculus
7360	17227	27427	1.39	0.0E+00	BE270053.1	EST_HUMAN	6040005.Y1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:2823973 5' similar to gbL35049 Mus musculus
7368	17348	27651	2.71	0.0E+00	BF48013.1	EST_HUMAN	Q0223150F1 NC1 CGAP_Bme87 Homo sapiens cDNA clone IMAGE:4188500 5'
7383	17352	27457	9	0.0E+00	BE12351.1	EST_HUMAN	QVZ-HT0698-250700-282-508 HT0693 Homo sapiens cDNA
7406	17323	27719	11.81	0.0E+00	AL442276.1	EST_HUMAN	DXFZ-434.0120.J1 434 (exon)nt: b1e33 Homo sapiens cDNA clone DXFZ-434.0120 5'
7425	17392	27503	1.27	0.0E+00	A039043.1	EST_HUMAN	069831.X1 Swine NSF_Fa_SW_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:1051249 3' similar to
7426	16442	26928	2.08	0.0E+00	11560151	NT	TR-014877 Q14877 KIAA0171 PROTEIN.1
7428	16442	26928	2.08	0.0E+00	11560151	NT	Homo sapiens hypobulbar C2H2 zinc finger protein FLJ22604 (FLJ22604). mRNA
7431	16444	26932	8.96	0.0E+00	A230609.1	EST_HUMAN	Homo sapiens hypobulbar C2H2 zinc finger protein FLJ22604 (FLJ22604). mRNA
7431	16444	26932	8.96	0.0E+00	A230609.1	EST_HUMAN	P28316.003 REOSOMAL PROTEIN L2A.1
7432	16444	26933	8.96	0.0E+00	A230609.1	EST_HUMAN	q160603.X1 NC1 CGAP_Lut Homo sapiens cDNA clone IMAGE:1601298 3' similar to SW_FL2B_HUMAN
7432	16448	26934	1.99	0.0E+00	AY95936.1	EST_HUMAN	P28316.003 REOSOMAL PROTEIN L2A.1
7450	17359	27464	3.62	0.0E+00	AF153466.1	NT	EST360026 IMAGE:neuropathic, MGC7 Homo sapiens cDNA
7461	17321	27464	4.9	0.0E+00	BE756926.1	EST_HUMAN	Homo sapiens polycystic kidney disease 2-like protein (PKD2L1) gene, exon 8
7463	17323	27529	1.37	0.0E+00	BE751832.1	EST_HUMAN	601105042F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3356722 5'
7463	17323	27530	1.37	0.0E+00	BE751832.1	EST_HUMAN	601105042F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3356722 5'
7464	17324	27531	7.21	0.0E+00	AW163776.1	EST_HUMAN	60146628F1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:3870007 5'
7464	17324	27531	7.21	0.0E+00	AW163776.1	EST_HUMAN	au6064.Y1 Schneider feed brain 00004 Homo sapiens cDNA clone IMAGE:27703142 5' similar to gb-M85072
7475	17336	27541	2.86	0.0E+00	BE283191.1	EST_HUMAN	605 REOSOMAL PROTEIN L7A (HUMAN)
7488	17368	27662	3.98	0.0E+00	CO0158.1	EST_HUMAN	601149504F2 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:3160477 5'
7488	17368	27662	3.98	0.0E+00	CO0158.1	EST_HUMAN	CO6159 Homo sapiens pancreatic islet Homo sapiens cDNA clone hsc6505
7488	17368	27663	3.98	0.0E+00	CO0168.1	EST_HUMAN	CO6159 Homo sapiens pancreatic islet Homo sapiens cDNA clone hsc6505
7490	17390	27666	3.22	0.0E+00	BE14615.1	EST_HUMAN	601579053F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3527048 5'
7490	17390	27674	1.93	0.0E+00	11437252	NT	Homo sapiens solute carrier family 21 (organic anion transporter), member 9 (SLC21A9). mRNA
7490	17390	27674	1.93	0.0E+00	11437252	NT	Homo sapiens solute carrier family 21 (organic anion transporter), member 9 (SLC21A9). mRNA
7499	17396	27675	1.93	0.0E+00	11437252	NT	Homo sapiens solute carrier family 21 (organic anion transporter), member 9 (SLC21A9). mRNA

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Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF-SEQ ID NO:	Expression Signal	West Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7499	17369	27576	1.63	0.0E+00	11437282	NT	Homo sapiens scutellin carrier family 21 (organic anion transporter), member 9 (SLC21A9), mRNA
7514	17302	27569	1.47	0.0E+00	BE000549.1	EST_HUMAN	901674245F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE3969238 5'
7530	17381	27591	2.59	0.0E+00	AF101948.1	NT	Homo sapiens keratin 2a (KRT2E) gene, complete cds
7530	17381	27592	2.56	0.0E+00	AF101948.1	NT	Homo sapiens keratin 2a (KRT2E) gene, complete cds
7548	17399	27612	1.47	0.0E+00	BE03977.1	EST_HUMAN	KC22-810642-133030-017 901 870642 Homo sapiens cDNA
7550	17410	27626	1.76	0.0E+00	AW500293.1	EST_HUMAN	UHFH-BNC-49g-B-124UL11 NIH_MGC_50 Homo sapiens cDNA clone IMAGE-3078943 5'
7559	17410	27627	1.76	0.0E+00	AW500293.1	EST_HUMAN	UHFH-BNC-49g-B-124UL11 NIH_MGC_50 Homo sapiens cDNA clone IMAGE-3078943 5'
7563	17414	27629	1.25	0.0E+00	AF020018.1	NT	Homo sapiens chromosome 9 duplication of the T cell receptor beta locus and Tyspargin gene families
7583	17414	27630	1.25	0.0E+00	AF020030.1	NT	Homo sapiens chromosome 9 duplication of the T cell receptor beta locus and Tyspargin gene families
7590	17431	27645	2.45	0.0E+00	AF160598.1	EST_HUMAN	UHFH-BNC-345-C-07-CT11 NIH_MGC_50 Homo sapiens cDNA clone IMAGE-3077994 5'
7607	17468	27673	1.34	0.0E+00	AF030683.1	NT	Multiple sclerosis associated retrovirus polyprotein (p2) mRNA, partial cds
7621	17472	27691	2.56	0.0E+00	573498.1	NT	AlGF-androgen-induced growth factor AlGF [human, placenta, GenomicRNA, 468 nt, segment 6 of 5]
7621	17472	27692	2.56	0.0E+00	573498.1	NT	AlGF-androgen-induced growth factor AlGF [human, placenta, GenomicRNA, 468 nt, segment 6 of 5]
7622	17473	27693	2.57	0.0E+00	BE06320.1	EST_HUMAN	901334603F1 NIH_MGC_39 Homo sapiens cDNA clone IMAGE3988690 5'
7630	17481	27701	1.62	0.0E+00	AW363135.1	EST_HUMAN	CNC-CT0311-301169-043-R11 CT0311 Homo sapiens cDNA
7650	17500	27722	2.17	0.0E+00	AU103249.1	EST_HUMAN	AU103249 NT25P3 Homo sapiens cDNA clone NT25P3004280 5'
7650	17500	27723	2.17	0.0E+00	AU103249.1	EST_HUMAN	AU103249 NT25P3 Homo sapiens cDNA clone NT25P3004280 5'
7659	17509	27734	7.73	0.0E+00	BE740490.1	EST_HUMAN	901965568F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE3949383 5'
7659	17509	27736	7.73	0.0E+00	BE740490.1	EST_HUMAN	901965568F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE3949383 5'
7669	17518	27743	1.79	0.0E+00	7652097	NT	Homo sapiens KIAA0345 gene product (KIAA0345), mRNA
7682	17532	27756	2.22	0.0E+00	AU132449.1	EST_HUMAN	AU132449 NT25P3 Homo sapiens cDNA clone NT25P3004280 5'
7683	17533	27757	1.86	0.0E+00	AF162308.1	NT	Homo sapiens prolactin alpha 12 (PDLH-alpha12) mRNA, complete cds
7701	17551	27776	2.72	0.0E+00	AF009220.1	NT	Homo sapiens leukocyte immunoglobulin-like receptor-1 mRNA, complete cds
7701	17551	27777	2.72	0.0E+00	AF009220.1	NT	Homo sapiens leukocyte immunoglobulin-like receptor-1 mRNA, complete cds
7708	17559	27784	1.95	0.0E+00	BE092938.1	EST_HUMAN	MRA-TNG114-110500-101-404 TNG114 Homo sapiens cDNA
7720	17570	27785	2.44	0.0E+00	BE280793.1	EST_HUMAN	901152271F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE3139798 5'
7728	17578	27800	1.74	0.0E+00	AW23629.1	EST_HUMAN	9017801-11 NC1 GMAP CML1 Homo sapiens cDNA clone IMAGE2069977 3' similar to gb-X02162_cds11.L1
7736	17580	27810	1.91	0.0E+00	11427235	NT	LACTATE DEHYDROGENASE M CHAIN (HUMAN);
7753	17603	27826	5.98	0.0E+00	AU143973.1	EST_HUMAN	Homo sapiens Gleditsia-Lupinus syndrome 1 (CHS1) mRNA
7753	17603	27826	5.98	0.0E+00	AU143973.1	EST_HUMAN	Homo sapiens cDNA clone T9044102387 5'

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[illegible]

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Table 4

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8032	17924	28171	2.33	0.0E+00	AV171075.1	EST_HUMAN	AV171075 Cu Homo sapiens cDNA clone CuA1C905 5'
8034	17926	28171	6.11	0.0E+00	AW18137683.1	EST_HUMAN	RC5-ST10197-12020010-03 S10197 Homo sapiens cDNA
8040	17931	28178	6.43	0.0E+00	AW1965683.1	EST_HUMAN	EST13795036 IMAGE: ressequences, MAGH Homo sapiens cDNA
8057	17942	28191	2.5	0.0E+00	11431124.NT	NT	Homo sapiens ATP-binding cassette, sub-family A (ABC1), member 3 (ABC3), mRNA
8051	17942	28192	2.5	0.0E+00	11431124.NT	NT	Homo sapiens ATP-binding cassette, sub-family A (ABC1), member 3 (ABC3), mRNA
8054	17945	28195	1.99	0.0E+00	AW057621.1	EST_HUMAN	TR005686 Soares NSF FB_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:2583706 3' similar to
8059	17950	28200	1.92	0.0E+00	BE243270.1	EST_HUMAN	TCAP100917 Pediatric acute myelogenous leukemia cell (FAB M1) Bay/Jar-HQSC project-TOA4 Homo sapiens cDNA clone TCAP100917
8060	17951	28201	4.86	0.0E+00	AW62239.1	EST_HUMAN	MSR1 NSR1, regulatory element
8060	17951	28202	4.86	0.0E+00	AW62239.1	EST_HUMAN	MSR1 NSR1, regulatory element
8068	17959	28209	2.91	0.0E+00	11545911	NT	Homo sapiens NOD2 protein (NOD2), mRNA
8068	17959	28210	2.91	0.0E+00	11545911	NT	Homo sapiens NOD2 protein (NOD2), mRNA
8081	17972	28221	2.01	0.0E+00	AW4047793.1	EST_HUMAN	UHF1RLO-404-04-CUT1 NIH IMGC 37 Homo sapiens cDNA clone IMAGE:3056885 5'
8084	17975	28224	2.01	0.0E+00	AW4047793.1	EST_HUMAN	Homo sapiens hypothetical protein FLJ20078 (FLJ20078), mRNA
8085	17976	28225	4.3	0.0E+00	11424829.NT	NT	Homo sapiens 5-hydroxycytidine (serotonin) receptor 1E (HTR1E), mRNA
8085	17976	28225	4.3	0.0E+00	11424829.NT	NT	Homo sapiens 5-hydroxycytidine (serotonin) receptor 1E (HTR1E), mRNA
8088	17977	28227	2.73	0.0E+00	AB91827.1	EST_HUMAN	Wd2003.1 Soares Discligraic codon_NHCD Homo sapiens cDNA clone IMAGE:282716 3'
8088	17980	28231	3.04	0.0E+00	BE887106.1	EST_HUMAN	601606204P2 NIH IMGC 71 Homo sapiens cDNA clone IMAGE:390866 5'
8093	17984	28233	10.56	0.0E+00	BE891030.1	EST_HUMAN	60143462P2 NIH IMGC 72 Homo sapiens cDNA clone IMAGE:3919039 5'
8095	17986	28234	22.36	0.0E+00	8622389.NT	NT	Homo sapiens myosin, heavy polypeptide 2, skeletal muscle, adult (MYH2), mRNA
8095	17986	28235	22.36	0.0E+00	8622389.NT	NT	Homo sapiens myosin, heavy polypeptide 2, skeletal muscle, adult (MYH2), mRNA
8110	18000	28247	1.91	0.0E+00	BE903304.1	EST_HUMAN	60167433P2 NIH IMGC 72 Homo sapiens cDNA clone IMAGE:3957342 5'
8113	18048	28515	4.05	0.0E+00	AA169006.1	EST_HUMAN	z96b51.1 Stralagene muscle 937209 Homo sapiens cDNA clone IMAGE:027933 5' similar to gb-X03740
8134	18022	28209	4.69	0.0E+00	BE709468.1	EST_HUMAN	MYOSIN HEAVY CHAIN, SKELETAL MUSCLE (HUMAN)
8143	18031	28278	6.8	0.0E+00	AV1727952.1	EST_HUMAN	60158852P2 NIH IMGC 73 Homo sapiens cDNA clone IMAGE:394301 5'
8143	18031	28278	6.8	0.0E+00	AV1727952.1	EST_HUMAN	AV1727952 HTG Homo sapiens cDNA clone HTCA0105 5'
8156	18044	28296	17.96	0.0E+00	AW610956.1	EST_HUMAN	xy4010.1 NCL CGAP_Lym12 Homo sapiens cDNA clone HTCA0105 5'
8167	18049	28301	2.17	0.0E+00	AU135741.1	EST_HUMAN	RIBOSOMAL PROTEIN S16 (HUMAN); AU135741 PLACE1 Homo sapiens cDNA clone PLACE:1002794 5'

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Probe SEQ ID No.	Exam SEQ ID No.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) HT BLAST Value	Top HT Accession No.	Top HT Database Source	Top HT Descriptor
8106	18054	28304	3.45	0.0E+00	AW593333.1	EST_HUMAN	hg13402.x1 Soares_NFL_T1_GBC_S1 Homo sapiens cDNA clone IMAGE:2944773 3' similar to contains element MSRI1 repetitive element;
8166	18054	28305	3.46	0.0E+00	AW593333.1	EST_HUMAN	hg13402.x1 Soares_NFL_T1_GBC_S1 Homo sapiens cDNA clone IMAGE:2944773 3' similar to contains element MSRI1 repetitive element;
8166	18054	28306	3.45	0.0E+00	AW593333.1	EST_HUMAN	hg13402.x1 Soares_NFL_T1_GBC_S1 Homo sapiens cDNA clone IMAGE:2944773 3' similar to contains element MSRI1 repetitive element;
8168	18056	28307	1.82	0.0E+00	Z24897.1	NT	Hs03033 normalized infant brain cDNA Homo sapiens cDNA clone IMAGE:2736846 3'
8169	18057	28309	2.8	0.0E+00	AW451230.1	EST_HUMAN	Homo sapiens mRNA for KIAA0887 protein, partial cds
8170	18054	28313	2.12	0.0E+00	D110883.1	NT	Homo sapiens RGH1 gene, protein-coding element
8191	18077	28328	2.92	0.0E+00	AW538094.1	EST_HUMAN	w83601.x1 NCI-GCAP_Pant Homo sapiens cDNA clone IMAGE:2852985 3' similar to gp.X17115 IG MU CHAIN C REGION (HUMAN);
8162	18078	28329	5.84	0.0E+00	AW451230.1	EST_HUMAN	UJHBS-af1-01-DU-1st NCI-GCAP_Sub5 Homo sapiens cDNA clone IMAGE:2736846 3'
8162	18078	28330	3.94	0.0E+00	AW451230.1	EST_HUMAN	UJHBS-af1-01-DU-1st NCI-GCAP_Sub5 Homo sapiens cDNA clone IMAGE:2736846 3'
8164	18078	28331	14.21	0.0E+00	4958632	NT	Homo sapiens mRNA for KIAA0887 protein, partial cds
8191	18081	28332	2.03	0.0E+00	AB014597.1	NT	Homo sapiens RGH1 gene, protein-coding element
8208	18092	28348	2.35	0.0E+00	BE288448.1	EST_HUMAN	UJHBS-af1-01-DU-1st NCI-GCAP_Sub5 Homo sapiens cDNA clone IMAGE:2736846 3'
8224	18092	28350	1.88	0.0E+00	AB011117.1	NT	Homo sapiens mRNA for KIAA0435 protein, partial cds
8227	18109	28363	96.82	0.0E+00	Z02661.1	NT	Homo sapiens of cardiac alpha-myosin heavy chain gene
8240	18120	28371	3.47	0.0E+00	BE27185.1	EST_HUMAN	UJHBS-af1-01-DU-1st NCI-GCAP_Sub5 Homo sapiens cDNA clone IMAGE:2736846 3'
8241	18121	28372	28.37	0.0E+00	BF654031.1	EST_HUMAN	UJHBS-af1-01-DU-1st NCI-GCAP_Sub5 Homo sapiens cDNA clone IMAGE:2736846 3'
8244	18124	28374	6.16	0.0E+00	AW118386.1	EST_HUMAN	UJHBS-af1-01-DU-1st NCI-GCAP_Sub5 Homo sapiens cDNA clone IMAGE:2736846 3'
8245	18125		2.72	0.0E+00	AW265260.1	EST_HUMAN	UJHBS-af1-01-DU-1st NCI-GCAP_Sub5 Homo sapiens cDNA clone IMAGE:2736846 3'
8260	18130	28378	6.77	0.0E+00	AW148089.1	EST_HUMAN	UJHBS-af1-01-DU-1st NCI-GCAP_Sub5 Homo sapiens cDNA clone IMAGE:2736846 3'
8260	18130	28379	6.77	0.0E+00	AW148089.1	EST_HUMAN	UJHBS-af1-01-DU-1st NCI-GCAP_Sub5 Homo sapiens cDNA clone IMAGE:2736846 3'
8261	18131	28380	3.06	0.0E+00	AV391837.1	EST_HUMAN	UJHBS-af1-01-DU-1st NCI-GCAP_Sub5 Homo sapiens cDNA clone IMAGE:2736846 3'
8262	18142	28388	4.02	0.0E+00	AW118063.1	EST_HUMAN	UJHBS-af1-01-DU-1st NCI-GCAP_Sub5 Homo sapiens cDNA clone IMAGE:2736846 3'
8266	18145	28389	18.63	0.0E+00	11424728	NT	Homo sapiens Insulin receptor (INSR), mRNA
8271	18151	28392	1.78	0.0E+00	AW604918.1	EST_HUMAN	UJHBS-af1-01-DU-1st NCI-GCAP_Sub5 Homo sapiens cDNA clone IMAGE:2736846 3'
8271	18151	28393	1.78	0.0E+00	AW604918.1	EST_HUMAN	UJHBS-af1-01-DU-1st NCI-GCAP_Sub5 Homo sapiens cDNA clone IMAGE:2736846 3'
8272	18152	28394	2.14	0.0E+00	BF243068.1	EST_HUMAN	UJHBS-af1-01-DU-1st NCI-GCAP_Sub5 Homo sapiens cDNA clone IMAGE:2736846 3'
8273	18153	28396	46.6	0.0E+00	BE288120.1	EST_HUMAN	UJHBS-af1-01-DU-1st NCI-GCAP_Sub5 Homo sapiens cDNA clone IMAGE:2736846 3'
8282	18161	28403	2.83	0.0E+00	U00326.1	NT	Homo sapiens protein kinase C substrate 80K-H (PKRCS8), gene, exon 15-17
8283	18162	28404	68.7	0.0E+00	Z20556.1	NT	Homo sapiens of cardiac alpha-myosin heavy chain gene

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Description
8287	18168	28409	3.52	0.0E+00	BE73036.1	EST HUMAN	RC1-FT0134-170700-012-07 FT0134 Homo sapiens cDNA
8287	18168	28410	3.52	0.0E+00	BE73036.1	EST HUMAN	RC1-FT0134-170700-012-07 FT0134 Homo sapiens cDNA
8307	18164	28431	24.55	0.0E+00	AA740782.1	EST HUMAN	MSR1 repetitive element 1
8313	18190	28439	3.12	0.0E+00	AF252003.1	NT	Homo sapiens signaling lymphocyte activation molecule (SLAM) gene, exon 2
8326	18203	28462	146.55	0.0E+00	CQ5009.1	EST HUMAN	O50509 Human heart cDNA (Ynakemura) Homo sapiens cDNA clone 3NHC4817
8333	18210	28460	2.17	0.0E+00	AA748376.1	EST HUMAN	ca589101.H1 NCI CGAP CG81 Homo sapiens cDNA clone IMAGE:1305009 5'
8333	18210	28461	2.17	0.0E+00	AA748376.1	EST HUMAN	ca589101.H1 NCI CGAP CG81 Homo sapiens cDNA clone IMAGE:1305009 5'
8341	18218	28470	2.41	0.0E+00	M78448.1	EST HUMAN	EST00569 Fetal brain, Striatum (cat0283206) Homo sapiens cDNA clone HFBC028
8341	18218	28471	2.41	0.0E+00	M78448.1	EST HUMAN	EST00569 Fetal brain, Striatum (cat0283206) Homo sapiens cDNA clone HFBC028
8344	18221	28472	1.82	0.0E+00	BF335265.1	EST HUMAN	QV2-HT0069-020800-295-07 HT0069 Homo sapiens cDNA
8345	18222	28473	8.08	0.0E+00	AL157698.1	EST HUMAN	DKFZ761J2118.11 761 (synonym: hsm2) Homo sapiens cDNA clone DKFZ761J2118 5'
8357	18234	28482	10.53	0.0E+00	AL115988.1	EST HUMAN	AUT18668 HEMBA 1 Homo sapiens cDNA clone HELBA1000424 5'
8376	18252	28503	1.86	0.0E+00	BF365583.1	EST HUMAN	IL3-NT0104-200500-143-07 NT0104 Homo sapiens cDNA
8395	18271	28523	3.78	0.0E+00	BE132360.1	EST HUMAN	PMA-HT0845-009500-002-558 HT0845 Homo sapiens cDNA
8395	18271	28524	3.78	0.0E+00	BE132360.1	EST HUMAN	PMA-HT0845-009500-002-558 HT0845 Homo sapiens cDNA
8403	18281	28533	3.46	0.0E+00	BE590423.1	EST HUMAN	0014390251 NIH MGCC 72 Homo sapiens cDNA clone IMAGE:3921442 5'
8410	18285	28539	1.74	0.0E+00	AY505307.1	EST HUMAN	UHF-B12 age-H-01-01-01 NIH MGCC 50 Homo sapiens cDNA clone IMAGE:3977019 5'
8410	18285	28540	1.74	0.0E+00	AY505307.1	EST HUMAN	UHF-B12 age-H-01-01-01 NIH MGCC 50 Homo sapiens cDNA clone IMAGE:3977019 5'
8442	18316	28574	4	0.0E+00	BE97953.1	EST HUMAN	0014404061 NIH MGCC 72 Homo sapiens cDNA clone IMAGE:3925403 5'
8443	18317	28576	1.86	0.0E+00	AA59548.1	EST HUMAN	ca889111.x1 Schiller meningioma Homo sapiens cDNA clone IMAGE:1952804 3'
8443	18317	28576	1.86	0.0E+00	AA59548.1	EST HUMAN	ca889111.x1 Schiller meningioma Homo sapiens cDNA clone IMAGE:1952804 3'
8465	18328	28587	68.73	0.0E+00	F00854.1	EST HUMAN	HS877E122 STRATAGENE Human skeletal muscle cDNA library, cat. #936215, Homo sapiens cDNA clone 77E12
8465	18328	28588	68.73	0.0E+00	F00854.1	EST HUMAN	HS877E122 STRATAGENE Human skeletal muscle cDNA library, cat. #936215, Homo sapiens cDNA clone 77E12
8480	18353	28618	3.88	0.0E+00	4768627	NT	Homo sapiens neuritin III (NRXN3) mRNA
8481	18354	28619	4.54	0.0E+00	BF206561.1	EST HUMAN	6018709021 NIH MGCC 19 Homo sapiens cDNA clone IMAGE:4101433 5'
8483	18356	28620	16	0.0E+00	AY207794.1	EST HUMAN	UHF-B12 age-H-01-01-01 NIH CGAP S424 Homo sapiens cDNA clone IMAGE:274312 3'
8484	18357	28621	3.77	0.0E+00	AY694675.1	EST HUMAN	RCS-CT0380-210100-032-c10 CT0380 Homo sapiens cDNA
8484	18357	28622	3.77	0.0E+00	AY694675.1	EST HUMAN	RCS-CT0380-210100-032-c10 CT0380 Homo sapiens cDNA
8489	18361	28625	6.91	0.0E+00	AB018260.1	NT	Homo sapiens mRNA for KIAA0717 protein, partial cds
8489	18361	28626	6.91	0.0E+00	AB018260.1	NT	Homo sapiens mRNA for KIAA0717 protein, partial cds



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Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Description
8490	18303	28628	2.99	0.0E+00	BE209846.1	EST_HUMAN	bat4407.y1 NIH_MGC.7 Homo sapiens cDNA clone IMAGE:282373 5' similar to TR:076022 076022 E1B-59KDA-ASSOCIATED PROTEIN ;
8490	18303	28628	2.99	0.0E+00	BE209846.1	EST_HUMAN	bat4407.y1 NIH_MGC.7 Homo sapiens cDNA clone IMAGE:282373 5' similar to TR:076022 076022 E1B-59KDA-ASSOCIATED PROTEIN ;
8511	18303	28628	2.85	0.0E+00	11024711	NT	Homo sapiens myosin, heavy polypeptide 4, skeletal muscle (MYH4), mRNA
8514	18396	28651	2.01	0.0E+00	BF030657.1	EST_HUMAN	QVQ-UM0091-126900-385-612 UM0091 Homo sapiens cDNA
8518	18390	28603	2.9	0.0E+00	BE148078.1	EST_HUMAN	RC3-H10230-040900-110-04 H10230 Homo sapiens cDNA
8518	18390	28654	2.9	0.0E+00	BE148078.1	EST_HUMAN	RC3-H10230-040900-110-04 H10230 Homo sapiens cDNA
8529	18398	28605	6.47	0.0E+00	AA185005.1	EST_HUMAN	265811.1 Striatum muscle 937209 Homo sapiens cDNA clone IMAGE:627653 5' similar to gp-X03740
8546	18418	28637	4.47	0.0E+00	BF507676.1	EST_HUMAN	MYOSIN HEAVY CHAIN, SKELETAL MUSCLE (HUMAN);
8546	18418	28638	4.47	0.0E+00	BF507676.1	EST_HUMAN	UH814-ecdc-10-01-11 NGL CGAP Sub8 Homo sapiens cDNA clone IMAGE:3085028 3'
8553	18423	28652	2.16	0.0E+00	AL1135170.1	EST_HUMAN	UH814-ecdc-10-01-11 NGL CGAP Sub8 Homo sapiens cDNA clone IMAGE:3085028 3'
8557	18427	28656	5.62	0.0E+00	BE676401.1	EST_HUMAN	AJ135170 PLACE1 Homo sapiens cDNA clone IMAGE:3486207 5'
8557	18427	28667	5.62	0.0E+00	BE676401.1	EST_HUMAN	801489328F1 NIH_MGC.89 Homo sapiens cDNA clone IMAGE:3486207 5'
8568	18435	28673	10.32	0.0E+00	BF240536.1	EST_HUMAN	801489328F1 NIH_MGC.89 Homo sapiens cDNA clone IMAGE:3486207 5'
8571	18443	28714	3.05	0.0E+00	AE037737.1	NT	801873509F1 NIH_MGC.95 Homo sapiens cDNA clone IMAGE:4093710 5'
8571	18443	28714	3.05	0.0E+00	AE037737.1	NT	Homo sapiens mRNA for KIAA1316 protein, partial cds
8581	18449	28717	3.49	0.0E+00	11430668	NT	Homo sapiens mRNA for KIAA1316 protein, partial cds
8591	18449	28718	3.49	0.0E+00	11430668	NT	Homo sapiens retinoblastoma-like 2 (R130) (REL2), mRNA
8596	18463	28741	6.1	0.0E+00	BF576267.1	EST_HUMAN	Homo sapiens autolytic translation initiation factor 3A (EIF3A) mRNA
8603	18470	28741	2.49	0.0E+00	AV326783.1	EST_HUMAN	602134132F1 NIH_MGC.81 Homo sapiens cDNA clone IMAGE:4286602 5'
8605	18472	28744	5.44	0.0E+00	AV326783.1	EST_HUMAN	804005.x1 NIH_MGC.3 Homo sapiens cDNA clone IMAGE:2947177 5'
8608	18475		120.65	0.0E+00	M56083.1	NT	Human gamma actin-like pseudogene, complete cds
8612	18476	28740	3.18	0.0E+00	AI660668.1	EST_HUMAN	W82611.x1 Soares, Dieldgease, color, NHUC Homo sapiens cDNA clone IMAGE:2951180 3' similar to
8614	18481	28752	3.64	0.0E+00	BF306099.1	EST_HUMAN	gp-M87788 G9 GAMMA-1 CHAIN C REGION (HUMAN);
8614	18481	28753	3.64	0.0E+00	BF306099.1	EST_HUMAN	801889623F1 NIH_MGC.17 Homo sapiens cDNA clone IMAGE:412648 5'
8620	18486	28748	28.88	0.0E+00	BF302462.1	EST_HUMAN	801889623F1 NIH_MGC.17 Homo sapiens cDNA clone IMAGE:412648 5'
8639	18504		4.07	0.0E+00	BE580791.1	EST_HUMAN	QV2-NN0054-206800-333-604 NN0054 Homo sapiens cDNA
8648	18512	28793	2.89	0.0E+00	8623968	NT	801435605F1 NIH_MGC.72 Homo sapiens cDNA clone IMAGE:3624577 5'
8650	18514		2.24	0.0E+00	BF276592.1	EST_HUMAN	Homo sapiens gadin-like protein (GLP), mRNA
8650	18514		2.24	0.0E+00	BF276592.1	EST_HUMAN	801881947F1 NIH_MGC.53 Homo sapiens cDNA clone IMAGE:4081715 5'
8691	18550	28833	4.61	0.0E+00	BE203846.1	EST_HUMAN	bat4407.y1 NIH_MGC.7 Homo sapiens cDNA clone IMAGE:282373 5' similar to TR:076022 076022 E1B-59KDA-ASSOCIATED PROTEIN ;

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Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8651	18550	28934	3.81	0.0E+00	BE208846.1	EST HUMAN	hsa4607.v1 NH1_MGC.7 Homo sapiens cDNA clone IMAGE:282378 5' similar to TR:076022 076022 E1B
9683	18552	28936	3	0.0E+00	AW759028.1	EST HUMAN	59KD-ASSOCIATED PROTEIN.1 ; QVC-070235-101289-071_08 C10223 Homo sapiens cDNA
8668	18557		2.39	0.0E+00	AA659707.1	EST HUMAN	h420a.s1 NQ1 CGAP_P4 Homo sapiens cDNA clone IMAGE:104342 similar to gb:M6178 ALPHA-
8669	18148	24915	5	0.0E+00	AI934954.1	EST HUMAN	ACTININ.1, CYTOSKELETAL ISOFORM (HUMAN);
8670	18558	28942	7.41	0.0E+00	AI327595.1	EST HUMAN	402608.x1 NQ1 CGAP_K412 Homo sapiens cDNA clone IMAGE:284891 5'
8700	18518	28500	4.73	0.0E+00	BE185666.1	EST HUMAN	h420a.s1 NQ1 CGAP_P4 Homo sapiens cDNA clone IMAGE:284891 5'
8712	18529	28512	4.74	0.0E+00	AL046540.1	EST HUMAN	IL5-HT0731-02060-077-068 HT0731 Homo sapiens cDNA
8712	18529	28513	4.74	0.0E+00	AL046540.1	EST HUMAN	DKFZ4346178.J1 434 (synonym: hlec3) Homo sapiens cDNA clone DKFZ4346178 5'
8722	18539	28523	12.53	0.0E+00	AI923116.1	EST HUMAN	DKFZ4346178.J1 434 (synonym: hlec3) Homo sapiens cDNA clone DKFZ4346178 5'
8724	18530	28963	4.16	0.0E+00	AA759913.1	EST HUMAN	RECEPTOR (HUMAN).1; Homo sapiens cDNA clone IMAGE:284891 5' similar to gb:337431 LAMININ
8724	18530	28963	4.16	0.0E+00	AA759913.1	EST HUMAN	Q13686 ALKB-HOMOLOG PROTEIN.1 ;
8724	18530	28964	4.16	0.0E+00	AA759913.1	EST HUMAN	h41607.v1 NQ1 CGAP_P4 Homo sapiens cDNA clone IMAGE:1267468 3' similar to TR:Q13686
8726	18534	28969	2.33	0.0E+00	BE910546.1	EST HUMAN	Q13686 ALKB-HOMOLOG PROTEIN.1 ;
8737	17886	28130	5.67	0.0E+00	BE579847.1	EST HUMAN	601507030F1 NH1_MGC.70 Homo sapiens cDNA clone IMAGE:360528 5'
8772	18569	28975	2.78	0.0E+00	AI36917.1	NT	CHECKPOINT SUPPRESSOR.1 ;
8772	18569	28976	2.78	0.0E+00	AI36917.1	NT	Homo sapiens polyoma kidney disease-associated protein (PKD1) gene, complete cds
8784	18569	28988	4.02	0.0E+00	AI36917.1	EST HUMAN	Homo sapiens polyoma kidney disease-associated protein (PKD1) gene, complete cds
8791	18611	28622	1.97	0.0E+00	BE522371.1	EST HUMAN	Q1411036F1 NH1_MGC.72 Homo sapiens cDNA clone IMAGE:3910270 5'
8827	18640	28624	10.47	0.0E+00	BE748986.1	EST HUMAN	Q1411036F1 NH1_MGC.72 Homo sapiens cDNA clone IMAGE:3910270 5'
8827	18640	28625	10.47	0.0E+00	BE748986.1	EST HUMAN	Q1411036F1 NH1_MGC.72 Homo sapiens cDNA clone IMAGE:3910270 5'
8837	18560	28937	2.97	0.0E+00	AI141882.1	EST HUMAN	Q1411882 THYROT HOMO sapiens cDNA clone THYRC1001388 5'
8837	18560	28938	2.97	0.0E+00	AI141882.1	EST HUMAN	Q1411882 THYROT HOMO sapiens cDNA clone THYRC1001388 5'
8840	18563	28941	2.35	0.0E+00	AW000022.1	EST HUMAN	w421101.x1 NQ1 CGAP_Bm25 Homo sapiens cDNA clone THYRC1001388 5'
8843	19474	28943	3.84	0.0E+00	BF000233.1	EST HUMAN	CE11040 ZINC FINGER, C2H2 TYPE.1 ;
8851	18673	28962	3.19	0.0E+00	AW381778.1	EST HUMAN	TRIO.1 ;
8851	18673	28963	3.19	0.0E+00	AW381778.1	EST HUMAN	MR4-ST0118-261099-012-E03 S10118 Homo sapiens cDNA
8878	18590	28962	2.57	0.0E+00	NT	EST HUMAN	MR4-ST0118-261099-012-E03 S10118 Homo sapiens cDNA
8878	18590	28962	2.57	0.0E+00	NT	EST HUMAN	Homo sapiens KIA0247 gene product (KIA0247), mRNA

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### Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Exposition Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit/Descriptor
8878	18600	26889	2.57	0.0E+00	11436244	NT	Homo sapiens KIA0247 gene product (KIA0247), mRNA
8883	18601	26887	5.52	0.0E+00	U34263.1	NT	Homo sapiens protein-adapter (BAM22) gene, 5'
8883	18604	26869	2.04	0.0E+00	BE370254.1	EST_HUMAN	601237603P1 NH1_MGC_44 Homo sapiens cDNA clone IMAGE:3406023 5'
8886	18606	26860	2.04	0.0E+00	BE370254.1	EST_HUMAN	601237603P1 NH1_MGC_44 Homo sapiens cDNA clone IMAGE:3406023 5'
8886	18722	26434	83.21	0.0E+00	AA211693.1	EST_HUMAN	2760202.1 Strategies muscle 837200 Homo sapiens cDNA clone IMAGE:562203 5' similar to gb:303740
8890	18683	23003	4.08	0.0E+00	AF024930.1	EST_HUMAN	MYOSIN HEAVY CHAIN, SKELETAL MUSCLE (HUMAN);
8902	18710	23003	3.28	0.0E+00	BE370583.1	EST_HUMAN	UHRF390-anno-cd1-Q1-Q717 NH1_MGC_50 Homo sapiens cDNA clone IMAGE:3081217 5'
8903	18711	23006	37.93	0.0E+00	BE370693.1	EST_HUMAN	601237603P1 NH1_MGC_44 Homo sapiens cDNA clone IMAGE:3406023 5'
8904	18712	23007	2.93	0.0E+00	U00076.1	NT	601497821P1 NH1_MGC_69 Homo sapiens cDNA clone IMAGE:3842408 5'
8915	18723	23014	6.38	0.0E+00	BE405993.1	EST_HUMAN	Human von Willebrand factor pseudogene corresponding to exons 23 through 34
8916	18724	23015	1.93	0.0E+00	11427345	EST_HUMAN	601290403P1 NH1_MGC_17 Homo sapiens cDNA clone IMAGE:3628444 5'
8916	18724	23016	1.93	0.0E+00	11427345	EST_HUMAN	Homo sapiens protein kinase, AMP-activated, alpha 2 catalytic subunit (PRKAA2), mRNA
8916	18724	23017	1.93	0.0E+00	11427345	NT	Homo sapiens protein kinase, AMP-activated, alpha 2 catalytic subunit (PRKAA2), mRNA
8917	18726	23018	2.32	0.0E+00	AF23391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
8917	18726	23019	2.32	0.0E+00	AF23391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
8919	18727	23020	5.06	0.0E+00	BF081641.1	EST_HUMAN	602165722P1 NH1_MGC_83 Homo sapiens cDNA clone IMAGE:4260726 5'
8919	18727	23021	5.06	0.0E+00	BF081641.1	EST_HUMAN	602165722P1 NH1_MGC_83 Homo sapiens cDNA clone IMAGE:4260726 5'
8924	18732	23020	3.22	0.0E+00	BE0039372.1	EST_HUMAN	601670363P1 NH1_MGC_21 Homo sapiens cDNA clone IMAGE:3406023 5'
8933	18741	23034	6.16	0.0E+00	BE0039372.1	EST_HUMAN	601670363P1 NH1_MGC_21 Homo sapiens cDNA clone IMAGE:3406023 5'
8933	18741	23035	6.15	0.0E+00	BF120562.1	EST_HUMAN	601807524P1 NH1_MGC_19 Homo sapiens cDNA clone IMAGE:4170569 5'
8934	18742	23036	3.02	0.0E+00	X517765.1	NT	Human limbal immunoglobulin constant region complex (germline)
8934	18742	23037	3.02	0.0E+00	X517765.1	NT	Human limbal immunoglobulin constant region complex (germline)
8934	18745	23062	20.36	0.0E+00	BF306120.1	EST_HUMAN	601800534P1 NH1_MGC_17 Homo sapiens cDNA clone IMAGE:431416 5'
8935	18771	23062	1.98	0.0E+00	BE306801.1	EST_HUMAN	RC4-NN0025-120600-016-507 NN0025 Homo sapiens cDNA
8935	18771	23063	1.98	0.0E+00	BE306801.1	EST_HUMAN	RC4-NN0025-120600-016-507 NN0025 Homo sapiens cDNA
8939	18776	23068	31.57	0.0E+00	BE307175.1	EST_HUMAN	601117407P1 NH1_MGC_17 Homo sapiens cDNA clone IMAGE:353268 5'
8981	18786	23077	35.47	0.0E+00	7695905.1	EST_HUMAN	Homo sapiens myosin, heavy polypeptide 1, skeletal muscle, adult (MYH1), mRNA
8981	18786	23077	35.47	0.0E+00	7695905.1	EST_HUMAN	Homo sapiens myosin, heavy polypeptide 1, skeletal muscle, adult (MYH1), mRNA
8982	18787	23078	34.26	0.0E+00	11024711	NT	Homo sapiens myosin, heavy polypeptide 4, skeletal muscle (MYH4), mRNA
8982	18787	23078	34.26	0.0E+00	11024711	NT	Homo sapiens myosin, heavy polypeptide 4, skeletal muscle (MYH4), mRNA
8997	18792	23081	31.52	0.0E+00	F00844.1	EST_HUMAN	HS781E122 STRATAGENE Human skeletal muscle cDNA library, cat. #328315, Homo sapiens cDNA clone

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top Hit) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8997	19792	25082	31.52	0.0E+00	F00894.1	EST HUMAN	HSB77E122 STRATAGENE Human skeletal muscle cDNA library, cat. #593215, Homo sapiens cDNA clone 7YE12
9000	18903	25096	7.35	0.0E+00	U84744.1	NT	Human Chediak-Higashi syndrome protein short isoform (LYST) mRNA, complete cds
9002	18805	25096	92.9	0.0E+00	Z20566.1	NT	Human cDNA: Hs001500231.H1.MGC_19 Homo sapiens cDNA clone IMAGE:3563020 5'
9017	19747	24893	2.54	0.0E+00	BE312542.1	EST HUMAN	Homo sapiens chromosome 21 segment HS21C046
9031	19564		2.67	0.0E+00	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
9043	19505		3.43	0.0E+00	AI150293.1	EST HUMAN	Homo sapiens gene for AIE-a, complete cds
9043	18329		2.24	0.0E+00	AB011326.1	EST HUMAN	Homo sapiens chromosome 21 segment HS21C046
9062	18849		2.2	0.0E+00	AL163246.2	NT	Homo sapiens calcitonin binding protein 1 (KAC3303) mRNA
9071	18849		2.73	0.0E+00	11417862.NT	NT	Homo sapiens calcitonin binding protein 1 (KAC3303) mRNA
9090	18864		5.48	0.0E+00	5602973.NT	NT	Homo sapiens calcitonin binding protein 1 (KAC3303) mRNA
9123	19853	25096	1.63	0.0E+00	AF240798.1	NT	Homo sapiens calcitonin binding protein 1 (KAC3303) mRNA
9133	19571		2.88	0.0E+00	AL016831.1	EST HUMAN	Homo sapiens calcitonin binding protein 1 (KAC3303) mRNA
9169	19711		3.07	0.0E+00	11418318.NT	NT	Homo sapiens calcitonin binding protein 1 (KAC3303) mRNA
9187	18910		4.38	0.0E+00	AL046544.1	EST HUMAN	Homo sapiens calcitonin binding protein 1 (KAC3303) mRNA
9180	19310		2.36	0.0E+00	AB03497.1	EST HUMAN	Homo sapiens calcitonin binding protein 1 (KAC3303) mRNA
9218	19732		1.3	0.0E+00	NF4494.1	EST HUMAN	Human placenta fetal liver spleen 1 (NLS) Homo sapiens cDNA clone IMAGE:246222 3' similar to SW-POL, BAEVM P10272 POL, POLYPROTEIN;
9233	18952		3.36	0.0E+00	AF100656.1	NT	Homo sapiens calcitonin binding protein 1 (KAC3303) mRNA
9268	10752	20801	3.21	0.0E+00	4507500.NT	NT	Homo sapiens calcitonin binding protein 1 (KAC3303) mRNA
9268	10752	20802	3.21	0.0E+00	4507500.NT	NT	Homo sapiens calcitonin binding protein 1 (KAC3303) mRNA
9246	19612		2.75	0.0E+00	10092587.NT	NT	Homo sapiens calcitonin binding protein 1 (KAC3303) mRNA
9276	10477		2.7	0.0E+00	AF003528.1	NT	Homo sapiens calcitonin binding protein 1 (KAC3303) mRNA
9306	19412	25183	2.48	0.0E+00	11430460.NT	NT	Homo sapiens calcitonin binding protein 1 (KAC3303) mRNA
9370	19544	25084	3.23	0.0E+00	AW590382.1	EST HUMAN	Homo sapiens calcitonin binding protein 1 (KAC3303) mRNA
9382	18565		1.61	0.0E+00	BE300212.1	EST HUMAN	Homo sapiens calcitonin binding protein 1 (KAC3303) mRNA
9426	19307		2.33	0.0E+00	AF046875.1	NT	Homo sapiens calcitonin binding protein 1 (KAC3303) mRNA
9461	19092		1.56	0.0E+00	9355487	NT	Homo sapiens calcitonin binding protein 1 (KAC3303) mRNA
9498	19500		1.59	0.0E+00	AI204014.1	EST HUMAN	Homo sapiens calcitonin binding protein 1 (KAC3303) mRNA
9529	19196		1.59	0.0E+00	AB04446.1	EST HUMAN	Homo sapiens calcitonin binding protein 1 (KAC3303) mRNA



## CLAIMS

1. A spatially-addressable set of single exon nucleic acid probes for measuring gene expression in a sample derived  
5 from human heart comprising a plurality single exon nucleic probes, said probes comprising any one of the nucleotide sequences set out in SEQ ID NOS: 1 - 9,980 or a complementary sequence, or a portion of such a sequence.
- 10 2. A spatially-addressable set of single exon nucleic acid probes as claimed in claim 1 wherein each of said plurality of probes is separately and addressably amplifiable.
3. A spatially-addressable set of single exon nucleic acid  
15 probes as claimed in claim 1 wherein each of said plurality of probes is separately and addressably isolatable from said plurality.
4. A spatially-addressable set of single exon nucleic acid  
20 probes as claimed in any of claims 1 to 3 wherein said probes comprise any one of the nucleotide sequences set out in SEQ ID NOS.: 9,981 - 19,771.
5. A spatially-addressable set of single exon nucleic acid  
25 probes as claimed in any of claims 1 to 4, wherein each of said plurality of probes is amplifiable using at least one common primer.
6. A spatially-addressable set of single exon nucleic acid  
30 probes as claimed in any of claims 1 to 5 wherein the set comprises between 50 - 20,000 single exon nucleic acid probes.
7. A spatially-addressable set of single exon nucleic acid  
35 probes as claimed in any of claims 1 to 6, wherein the

average length of the single exon nucleic acid probes is between 200 and 500 bp.

8. A spatially-addressable set of single exon nucleic acid probes as claimed in any of claims 1 to 7, wherein at least 50% of said single exon nucleic acid probes lack prokaryotic and bacteriophage vector sequence.

9. A spatially-addressable set of single exon nucleic acid probes as claimed in any of claims 1 to 8, wherein at least 50% of said single exon nucleic acid probes lack homopolymeric stretches of A or T.

10. A spatially-addressable set of single exon nucleic acid probes as claimed in any of claims 1 - 9 characterised in that said set of probes is addressably disposed upon a substrate.

11. A spatially-addressable set of single exon nucleic acid probes as claimed in claim 10 wherein said substrate is selected from glass, amorphous silicon, crystalline silicon and plastic.

12. A microarray comprising a spatially addressable set of single exon nucleic acid probes as claimed in any of claims 1 - 11.

13. A single exon nucleic acid probe for measuring human gene expression in a sample derived from human heart comprising a nucleotide sequence as set out in any of SEQ ID NOs.: 1 - 9,980 or a complementary sequence or a fragment thereof wherein said probe hybridizes at high stringency to a nucleic acid molecule expressed in the human heart.

14. A single exon nucleic acid probe as claimed in claim 13 comprising a nucleotide sequence as set out in any of SEQ ID NOS.: 9,981 - 19,771 or a complementary sequence or a fragment thereof.

5

15. A single exon nucleic acid probe for measuring human gene expression in a sample derived from human heart which is a nucleic acid molecule having a sequence encoding a peptide comprising a peptide sequence as set out in any of  
10 SEQ ID NOS.: 19,772 - 29,119, or a complementary sequence or a fragment thereof wherein said probe hybridizes at high stringency to a nucleic acid expressed in the human heart.

16. A single exon nucleic acid probe as claimed in any one  
15 of claims 13 to 15 wherein said single exon nucleic acid probe comprises between 15 and 25 contiguous nucleotides of said SEQ ID NO.

17. A single exon nucleic acid probe as claimed in any one  
20 of claims 13 to 15, wherein said probe is between 3 - 25 kb in length.

18. A single exon nucleic acid probe as claimed in any one of claims 13 - 17, wherein said probe is DNA, RNA or PNA.

25

19. A single exon nucleic acid probe as claimed in any one of claims 13 - 18, wherein said probe is detectably labeled.

30 20. A single exon nucleic acid probe as claimed in any one of claims 13 - 19, wherein said probe lacks prokaryotic and bacteriophage vector sequence.

21. A single exon nucleic acid probe as claimed in any one  
35 of claims 13 - 20, wherein said probe lacks homopolymeric



stretches of A or T.

22. A method of measuring gene expression in a sample derived from human heart, comprising:

- 5       contacting the microarray of claim 12, with a first collection of detectably labeled nucleic acids, said first collection of nucleic acids derived from mRNA of human heart; and then  
measuring the label detectably bound to each probe of  
10       said microarray.

23. A method of identifying exons in a eukaryotic genome, comprising:

- algorithmically predicting at least one exon from  
15       genomic sequence of said eukaryote; and then detecting specific hybridization of detectably labeled nucleic acids to a single exon probe,  
wherein said detectably labeled nucleic acids are derived from mRNA from the heart of said eukaryote, said probe is a  
20       single exon probe having a fragment identical in sequence to, or complementary in sequence to, said predicted exon, said probe is included within a microarray according to claim 12, and said fragment is selectively hybridizable at high stringency.

25

24. A method of assigning exons to a single gene, comprising:

- identifying a plurality of exons from genomic sequence according to the method of claim 23; and  
30       then  
measuring the expression of each of said exons in a plurality of tissues and/or cell types using hybridization to single exon microarrays having a probe with said exon,  
35       wherein a common pattern of expression of said exons in

said plurality of tissues and/or cell types indicates that the exons should be assigned to a single gene.

25. A nucleic acid sequence as set out in any of SEQ ID  
5 NOS: 1 - 19,771 which encodes a peptide.

26. A peptide encoded by a sequence as set out in any of  
SEQ ID Nos: 1 - 19,771.

10 27. A peptide comprising a sequence as set out in any of  
SEQ ID Nos: 19,772 - 29,119.

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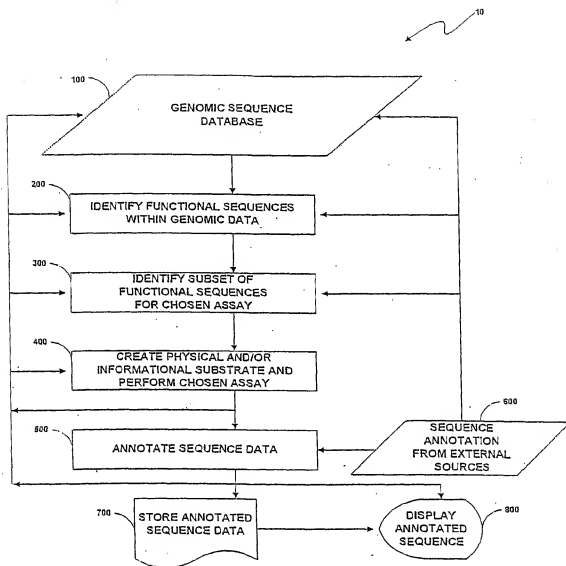


Fig. 1

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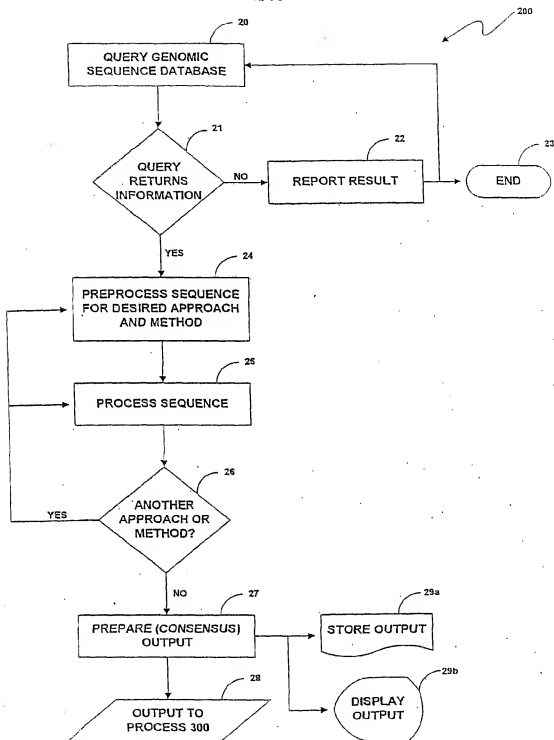


Fig. 2



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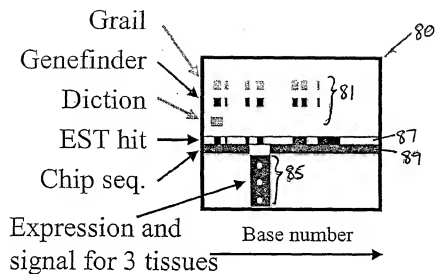


Fig. 4

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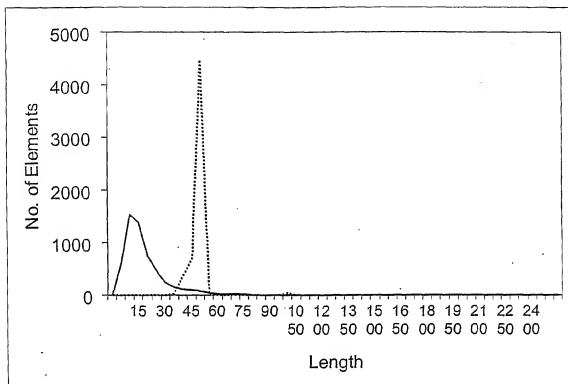


Fig. 5

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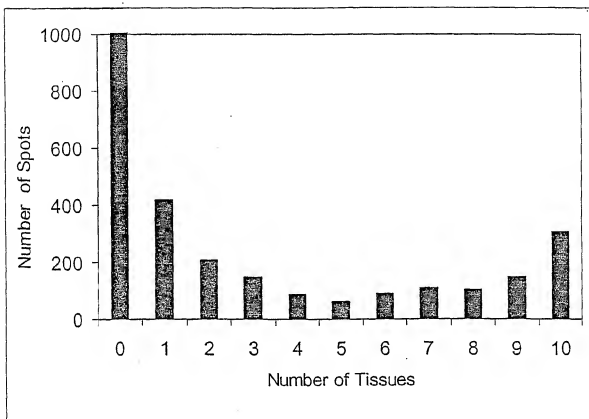


Fig. 6



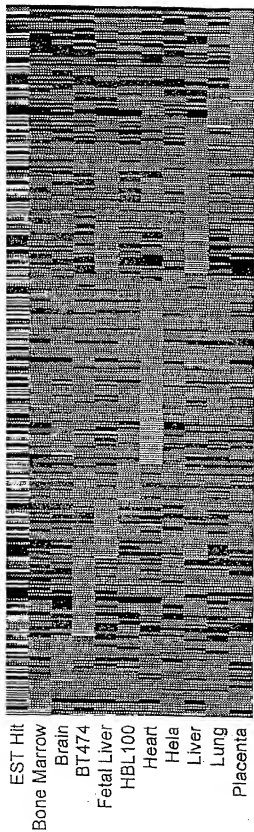


Fig. 7a

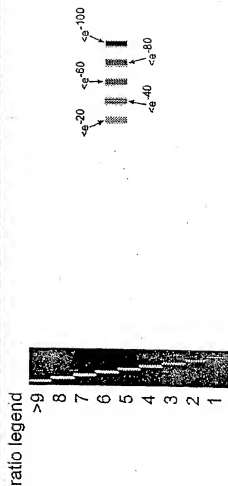


Fig. 7b

Fig. 7c

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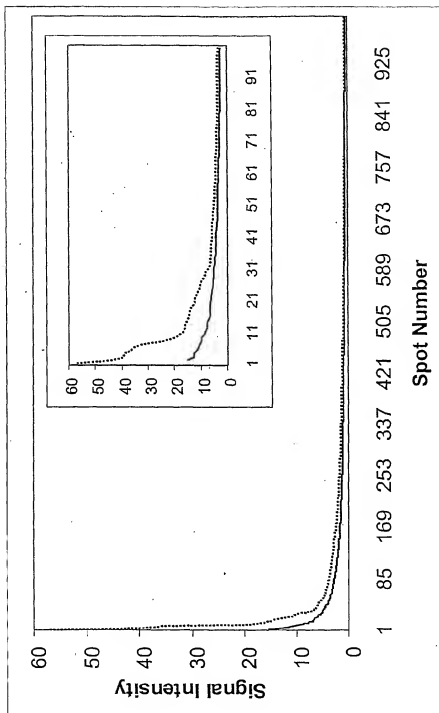
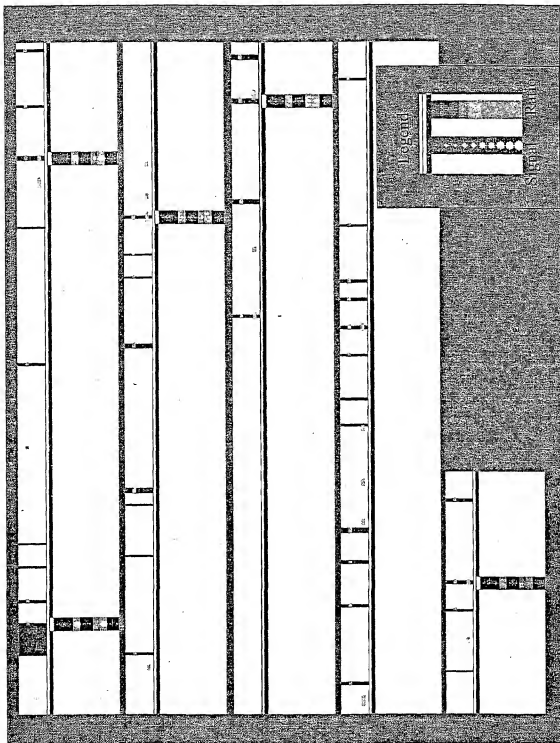


Fig. 8

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**Fig. 9**

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Fig. 10

